6840
10/10/2003

Mike Tehan
Attn: Scott Hoefer
National Oceanic and Atmospheric Administration
Fisheries Division
525 NE Oregon St., Suite 500
Portland, OR 97232-2737

Dear Mr. Tehan,

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter constitutes a request to the National Oceanic and Atmospheric Administration Fisheries Division for formal consultation initiation. Enclosed is a Biological Assessment (BA) prepared by the Central Oregon Resource Area of the Prineville District. The BA documents two types of proposed actions: grazing and prescribed burning; which 'may affect' the mid-Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NOAA Fisheries Division as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service with regard to this BA. The BA includes 2003 monitoring and constitutes the monitoring report as required by the previous Biological Opinion Terms and Conditions. Previous assessments and opinions had been organized and evaluated by entire allotments; within this assessment the evaluation is based on individual pastures within the allotment. For this reason all pastures are described in this assessment even though they may have been designated as 'No Effect'. The Prineville BLM requests that consultation be initiated on all Not Likely to Adversely Affect and Likely to Adversely Affect actions described in this assessment. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Christina M. Welch
Field Manager
Central Oregon Resource Area

Jerry Cordova
U.S. Fish and Wildlife Service
20310 Empire Avenue Suite A100
Bend, OR 97701

Dear Jerry,

Per regulations on interagency cooperation (50 CFR 402) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973 (as amended), this letter constitutes a request to the National Oceanic and Atmospheric Administration Fisheries Division for formal consultation initiation. Enclosed is a Biological Assessment (BA) prepared by the Central Oregon Resource Area of the Prineville District. The BA documents two types of proposed actions: grazing and prescribed burning; which 'may affect' the mid-Columbia summer steelhead ESU, which was listed as threatened under the ESA (March 16, 1999) and includes critical habitat as listed by the NOAA Fisheries Division as of March 16, 2000.

The Prineville BLM Central Oregon Resource Area is pursuing initiation of the streamlined consultation process as outlined in the March 1998 Endangered Species Consultation Handbook, prepared by U.S. Fish and Wildlife Service and National Marine Fisheries Service with regard to this BA. The BA includes 2003 monitoring and constitutes the monitoring report as required by the previous Biological Opinion Terms and Conditions. Previous assessments and opinions had been organized and evaluated by entire allotments; within this assessment the evaluation is based on individual pastures within the allotment. For this reason all pastures are described in this assessment even though they may have been designated as 'No Effect'. The Prineville BLM requests that consultation be initiated on all Not Likely to Adversely Affect and Likely to Adversely Affect actions described in this assessment. If you have any questions, please contact Brent Ralston at (541) 416-6713.

Sincerely,

Christina M. Welch
Field Manager
Central Oregon Resource Area

Biological Assessment for Steelhead Trout and its Habitat for Bureau of Land Management Lands Within the Lower John Day Subbasin

Submitted To:
National Oceanic and Atmospheric Administration
Fisheries Division
Portland Oregon

January 2004

Submitted by: Bureau of Land Management, Prineville District
Central Oregon Resource Area
For: Grazing Management and Prescribed Burning Actions

Project Information: Grazing allotment management and prescribed burning actions.

Project Location: Various locations within the lower John Day River subbasin.

Description of Action: Livestock timing and use on various grazing allotments containing public land managed by the Prineville District Bureau of Land Management for the next five years (2004-2008). Prescribed burning actions.

Species and Designated Critical Habitat: Mid-Columbia River steelhead and associated critical habitat in the lower John Day River subbasin.

Essential Fish Habitat: Essential Fish Habitat occurs within the lower John Day River subbasin in the form of migratory habitat utilized in the spring by spring Chinook and spawning and rearing habitat utilized in the winter by fall Chinook.

Notes: No additional notes.

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4.2.2.2 Discussion of the relationship between habitat in the action area and the biological requirements of the species

4.2.2.3 Use of Properly Functioning Conditions (PFC) the Matrix of Pathways and Indicators (MPI) approach, if appropriate

4.2.3 Map of project area at appropriate scale to show vegetation types and important biological features (species habitat, wetlands, unique plant assemblages, etc.)

4.2.4 Photographs keyed to locations labeled on map

4.3 Detailed description of habitat features that may be affected by the proposed action

5.0 Effects of the Action

5.1 Direct Effects (on each species and designated critical habitat) Discuss as appropriate: temporal and spatial limits of effects; species tolerances; severity of effect; mortality and other forms of

5.1.1 Use of logical framework for analysis (e.g. use MPI or other appropriate framework. Example pathways include: water quality; habitat access; habitat elements; channel conditions/dynamics; flow and hydrology; watershed conditions)

5.1.2 Provide examples of how conservation measures (identified in II Ciii above) would reduce or eliminate the adverse effects of the proposed action

5.2 Indirect Effects (same criteria as V. A. Direct Effects)

5.3 Effects from interdependent and interrelated actions

5.4 Effects from ongoing project activities (e.g. continued Operations and Maintenance)

5.5 Description of how the environmental baseline would be affected (can be integrated in V. A-D.)

5.6 If critical habitat is designated, discuss effects of the action on essential elements of critical habitat (e.g. cover or shelter; sites for breeding, reproduction, and rearing; etc. as discussed in Section III.C.ii.)

5.7 Use of best scientific and commercially available data

5.8 Effects determination for listed species and designated critical habitat (No Effect, NLAA, LAA)

5.8.1 NLAA effect determinations supported by evaluation of factors critical for making the determination (e.g. conservation measures)

5.9 Summary. Provide a quantification of the 'effects analysis' section (include assumptions, areas affected; should be qualitative, quantitative, and include a time frame)

5.10 Effect of proposed action on tribal resources or interests (if known)

6.0 Cumulative Effects (for Formal Consultation Only; LAA determinations)

6.1 Details all 'non-Federal' actions reasonably certain to occur in the action area in the foreseeable future. Includes state, local, private, and tribal actions (e.g. residential developments, watershed enhancement, etc.)

6.1.1 Do no use NEPA cumulative effects

6.1.2 Includes information from:

6.1.2.1 Planning Documents

6.1.2.2 Land-use Agencies

6.1.2.3 Transportation plans

6.1.2.4 Economic Trend information

7.0 Conclusions

7.1 Provides a recap of what has been examined in the BA. A summary of the project and effects determination

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9.0 Essential Fish Habitat

9.1 Description of the proposed action (may refer to BA project description)

9.2 Addresses EFH for appropriate Fisheries Management Plans (FMP).

9.3 Effects of proposed action

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9.3.2 Effects on managed species (unless effects to an individual species are unique, it is not necessary to discuss adverse effects on a species-by-species basis)

9.3.3 Effects on associated species, including prey species

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Appendix A Unauthorized Grazing Regulations

Appendix B Monitoring Report

Appendix C Prioritized List of Stream Mileages

Appendix D Status of Review of West Coast Steelhead from Washington, Idaho, Oregon and California

Appendix E John Steelhead Redd Counts – ODF&W

Appendix F Federal Register Notice

1. Background and History

1.1. Project History

1.1.1. Documentation of relevant correspondence

Scott Hoefer of NOAA Fisheries in Portland and Brent Ralston of the Prineville District BLM have engaged in numerous conversations and one field review of several allotments in the 2003 calendar year regarding these proposed and ongoing actions.

1.1.2. Supplemental information, general background, purpose of project

The Bureau of Land Management administers grazing on public lands across the western United States. The Prineville District administers those lands located in Central Oregon within the Deschutes and John Day River basins. The purpose of this project is to follow federal law and guidance with regard to grazing administration. The BLM also manages the rangelands to promote healthy conditions; to this end prescribed burning programs utilize fire to promote natural vegetative recovery in certain areas.

1.2. Federal Action History

1.2.1. Discussion of past consultations relevant to the proposed project

In 1999 the Prineville District initiated consultation on all May Affect grazing allotments. A Biological Assessment (BA) was prepared which addressed those actions and their effects for the 1999 grazing year. In 2000 another BA was prepared to address those grazing actions in 2000-2001. Then again in 2001 another BA was submitted to address those grazing actions in 2002-2003.

2. Description of the Action and Action Area

2.1.Discussion of Federal Action and legal authority/agency discretion

The Prineville BLM authorizes grazing on public lands within the project area for a specific timeframes called the season of use for a set amount of livestock forage – termed an animal unit month (AUM). An AUM is the amount of forage needed to feed a cow/calf pair for one month – for example 20 AUM's would sustain 20 cow/calf pairs for one month or 10 cow/calf pairs for two months.

The Prineville BLM also engages in a prescribed burning program focused on the recovery of native vegetation and increased health of rangelands within the project area.

2.2.Description of the project purpose and objectives

The purpose of the range administration program is consistent with federal laws and policy regarding management of public lands as multiple use as described by the Federal Land Management and Policy Act of 1976.

The purpose of prescribed burning is to promote recovery of rangeland systems and reintroduce fire.

2.3.Project Descriptions; activities to be authorized, funded or carried out by the Federal Action Agency

There are 10 grazing allotments with grazing permits within the lower subbasin of the John Day River which are addressed in this assessment. These allotments contain a total of 36 separate pastures that are addressed individually. Of this total, 23 pastures are considered "No Effect", 4 pastures are considered "May Effect, Not Likely to Adversely Affect" and 9 pastures are considered "May Effect, Likely to Adversely Affect" steelhead trout or its habitat. The primary reason for adverse determinations is because most BLM lands are low elevation areas, and spring grazing strategies (April-June) are the most conducive to maintaining and enhancing riparian conditions. However, this season of use

causes potential interactions between grazing livestock and spawning/incubating steelhead trout, creating a potential for take.

These pastures are within a watershed with Essential Fish Habitat; however all actions described in this assessment do not effect chinook salmon or their habitat.

In the lower John Day subbasin grazing varies from allotment to allotment; however, in most allotments public riparian areas along migratory corridors are grazed during spring. Grazing in riparian areas with spawning and rearing is typically conducted in late fall and winter. Grazing in other upland areas without connection or influence on steelhead habitat are grazed at various times throughout the year.

The following table depicts the grazing allotments and pastures and their respective category of effects on listed steelhead. (Table 1)

Table 1. Allotments and pastures and their effect on listed steelhead.

Allotment	Pasture	Section 7 Effects
Belshe	Little Ferry	LAA
Belshe	Dan's	NE
Belshe	80	NE
Belshe	Homestead	NE
Pine Creek	Zigzag	NLAA
Pine Creek	North Pole	NE
Pine Creek	Porter Canyon	LAA
Pine Creek	Cramer Canyon	LAA
Pine Creek	Bath Canyon	LAA
Pine Creek	Big Gulch River	NE
Pine Creek	Big Gulch	NE
Pine Creek	Burned Out Canyon	NE
Pine Creek	North Guyton	NE
Pine Creek	South Guyton	NE
Eakin	Jackknife	LAA
Eakin	Rutledge	NE
Eakin	Private	NE
Sixmile	Sixmile	NLAA
Sixmile	Hay Creek	LAA
C.H. Hill	Northside	NE
C.H. Hill	South	NE
C.H. Hill	Bologna Creek	LAA
Elsie Martin	Elsie Martin	NLAA
Hay Creek	North	NE
Hay Creek	Narrow	NE
Hay Creek	Exclusion	NE
Hay Creek	Irrigated Fields	NE
Hay Creek	Ag Field	NE

Hay Creek	West	NE
Hay Creek	Spring Hollow	NE
Pryor Farms	North	LAA
Pryor Farms	South	NE
Crown Rock	Crown Rock	NE
Crown Rock	Bear Creek	LAA
Crown Rock	Willow Spring	NE
West Bologna Creek	West Bologna	NLAA

As set forth in 43 CFR section 4140.1 of the BLM grazing regulations certain acts are prohibited on public lands. Some of these prohibited acts include certain grazing stipulations such as:

> Allowing livestock or other privately owned or controlled animals to graze or be driven across these lands:
> (i) without a permit or lease, and annual grazing authorization.
> (ii) in violation of the terms and conditions of a permit, lease, or other grazing use authorization including, but not limited to, livestock in excess of the number authorized;
> (iii) in an area or at a time different from that authorized.

Typically non-compliance with these regulations is termed unauthorized use. Unauthorized use is a prohibited act with regard to management of the public lands. Prohibited acts fall under certain civil and criminal guidelines as outlined in various regulatory documents. These guidelines for unauthorized use are listed in Appendix A. These guidelines outline the procedures and processes for correctly rectifying infractions of the unauthorized use guidelines. Unauthorized use can not be predicted, expected or planned for. It is a violation of public land use guidelines. Monitoring of approved grazing guidelines and permit schedules, such as that done under the Implementation Monitoring Module designed by the PACFISH Inter-agency Implementation Team, is meant to ascertain infractions of this type of prohibited act and begin the process of rectifying the infraction. These guidelines (see Appendix A) are national in scope and origin and are not under the discretion or purview of this district. All grazing actions are subject to these guidelines and as such become part of the proposed action.

In rare occasions infractions of these prohibitions do impact the relevant environmental indicators as noted for critical steelhead habitat as defined by the National Oceanic and Atmospheric Administration Fisheries Division. When this occurs the BLM will reinitiate consultation regarding specific action in areas where the critical environmental indicators have been altered.

The BLM is proposing to continue with the prescribed burn program to burn approximately 15,000 acres annually within the John Day Basin, to recreate the natural process of vegetative succession. Modern fire suppression and recent fire management plans have greatly altered the natural fire regimes, and have changed vegetative species composition, diversity, and ecosystem structure of most of the Northwest. The majority

of burns are rangeland sites in late or mid seral stage. The targeted vegetation for burning is mainly overstory big sagebrush and western juniper.

Long term goals of this program are to:

Restore the health and diversity of vegetation
Control the spread of western juniper
Reduce hazard fuels
Improve decadent aspen communities
Improve long-term hydrological regimes (water quality, flow, and timing)
Increase forage for wildlife and livestock

Prescribed burning is the planned application of fire to wildland fuels in their natural or modified state, under specific conditions of fuel, weather, and other variables to allow fire to achieve site specific resource management objectives. Prescribed burning can serve to improve soil conditions by reducing the amount of bare ground and increasing grass cover and organic matter. Gregory et al. (1991) states that under natural conditions, riparian plant communities have a high degree of structural and compositional diversity, reflecting the history of past disturbances such as floods, fire, wind, grazing, plant disease, and insect outbreaks.

Without periodic fire, species such as western juniper and sagebrush, increase in abundance under recent historical fire suppression methods. Research shows that expansion and increasing abundance of western juniper results in watershed degradation, which seriously affects productivity, water quantity and quality (Bedell et al, 1993). Sites occupied by juniper can release up to 1,600 lbs. per acre of sediment during rain storms or from the overland flow of melting snow. On semi-arid sites, water interception and use by western juniper causes a decline in forbs, grasses, and shrubs in the spaces between juniper canopies. This increases bare mineral soil in juniper-dominated watersheds (Bedell et al, 1993).

All burn units proposed for treatment would be evaluated for special resource needs (including Threatened or Endangered species habitat) and mitigating measures would be covered in the burn plan to ensure project objectives can be met, or the unit will be dropped from consideration. Some mitigation measures that will be considered in the development of the burn plans are:

Burn primarily in late summer or fall when most vegetation is dormant. Winter and spring burning may be done if needed to achieve objectives.

Mimic the natural historical fire regime. Burn in a mosaic pattern with irregular boundaries to create diversity and maximum edge effect to ensure adequate wildlife cover.

Use existing roads, trails or other natural fuel breaks to contain the prescribed fire.

Avoid allowing prescribed fire to enter the riparian zone of influence along perennial or fish bearing streams

Treatments would primarily occur on sagebrush-juniper plant associations, but may include ponderosa pine, aspen, and riparian sites. Prescription burn temperatures are not expected to exceed 500 degrees F. Following treatment, units will be monitored to determine the project's effectiveness, fire effects, and recovery rates using photo-point references, plots, and individual observations. Firing methods will be specific to each proposed unit and could include combinations of hand-held drip torches, heli-torches, ping-pong balls, and fuzees. In the event that a unit is selected without existing firelines present, fireline would be constructed from a combination of roads, handline, and blackline in a efficient manner that protects natural resources. All roads/line constructed would be rehabilitated using waterbars, and native seed mixes following completion of the burn. See Table 2 for proposed burn areas in 2004.

Table 2: Proposed Prescribed Burn Units for Fiscal Year 2004 in the John Day Basin

Name	**Location**	**Acres to Burn**
Sutton Mountain	Sutton Mountain/Mitchell	10000 acres
Total Acres to burn		10000 acres

2.3.1. Description of project activities (construction, O&M,harvest)

Grazing projects will involve livestock presence and removal of vegetation via ingestion. Prescribed burning projects will involve removal of vegetation via fire.

2.3.2. Operational characteristics of the proposed project

There are no additional operational characteristics for these projects.

2.3.3. Description of proposed conservation measures (specific impact avoidance or reduction measures proposed [BMPs])

Grazing activities are done in concert with local conditions and timeframes to promote riparian vegetation recovery and maintenance.

2.3.4. Description of mitigation (if any) required under other federal, state, or local permits (e.g. Corps wetland mitigation, WDFW HPA)

None applicable.

2.3.5. Discussion of underlying action/broader context/interdependent and interrelated actions

Grazing occurs throughout the John Day Basin on both public and private acreages. While this assessment addresses a handful of BLM permitted allotments, the BLM also manages numerous other allotments which have already been addressed in previous consultations or have been determined to have No Effect on listed species and will not be addressed unless conditions change.

Wildfire and other managed fires (typically private acreage) occur within the basin, the extent and intensity of these occurrences are not known by the BLM.

2.4.Discussion of known ongoing and previous projects in the action area, if available

Grazing has occurred within these allotments before over at least the last fifty years, possibly more.

2.4.1. 'Project area' and 'action area' defined (explain rational [i.e. extent of potential effects resulting from the project])

The John Day Basin encompasses about 5.1 million acres of an extensive interior plateau between the Cascade Range and the Blue Mountains in northeast-central Oregon. Most of the basin is privately owned (3.2 million acres). National Forest lands encompass about 1.53 million acres, and about 332,300 acres (about 7 percent) are managed by the BLM. Oregon Department of Fish and Wildlife (ODFW), National Park Service, Oregon State Land Board, Oregon Forestry Department, and the Corps of Engineers manage about 57,000 acres. Predominate management activities in this watershed are agriculture, grazing, timber, and recreation.

Within the John Day Basin are four 4th field Hydrologic Units (HU) or subbasins:

-Lower John Day #17070204
-Upper John Day #17070201
-North Fork John Day #17070202
-Middle Fork John Day #17070203

Table 3 shows total acres, and Prineville District BLM managed lands within each 4th field Hydrologic Unit. With the exception of the area upstream of Izee Falls in the South Fork of the John Day River these areas are designated as Essential Fish Habitat (EFH) by the Magnuson-Stevens Fishery Conservation and Management Act for chinook salmon.

Table 3. Subbasins in the John Day Basin.

Subbasin Name	Total Acres	Prineville District BLM Managed Acres
Lower John Day	2,011,000	242,618
Upper John Day	1,375,000	145,630
North Fork John Day	1,187,000	35,350
Middle Fork John Day	504,500	3,975

This assessment focuses of BLM management actions within the lower John Day subbasin; this includes 10 grazing allotments including a total of 36 pastures and approximately 15,000 acres of annual prescribed burning per year.

The project area contains all the BLM managed lands in the entire Lower John Day River subbasin for the purposes of prescribed fire occurrence and more specifically the allotment areas as described in Appendix B.

2.4.2. Description of project footprint and all areas potentially affected

Grazing potentially effects the critical habitat of listed species and to a lesser extent may pose a risk to individuals and their offspring during spawning and rearing timeframes.

2.4.3. HUC, watershed, Township, Range, Section

See Appendix B.

2.4.4. Quantification (square footage or acres) of area potentially affected

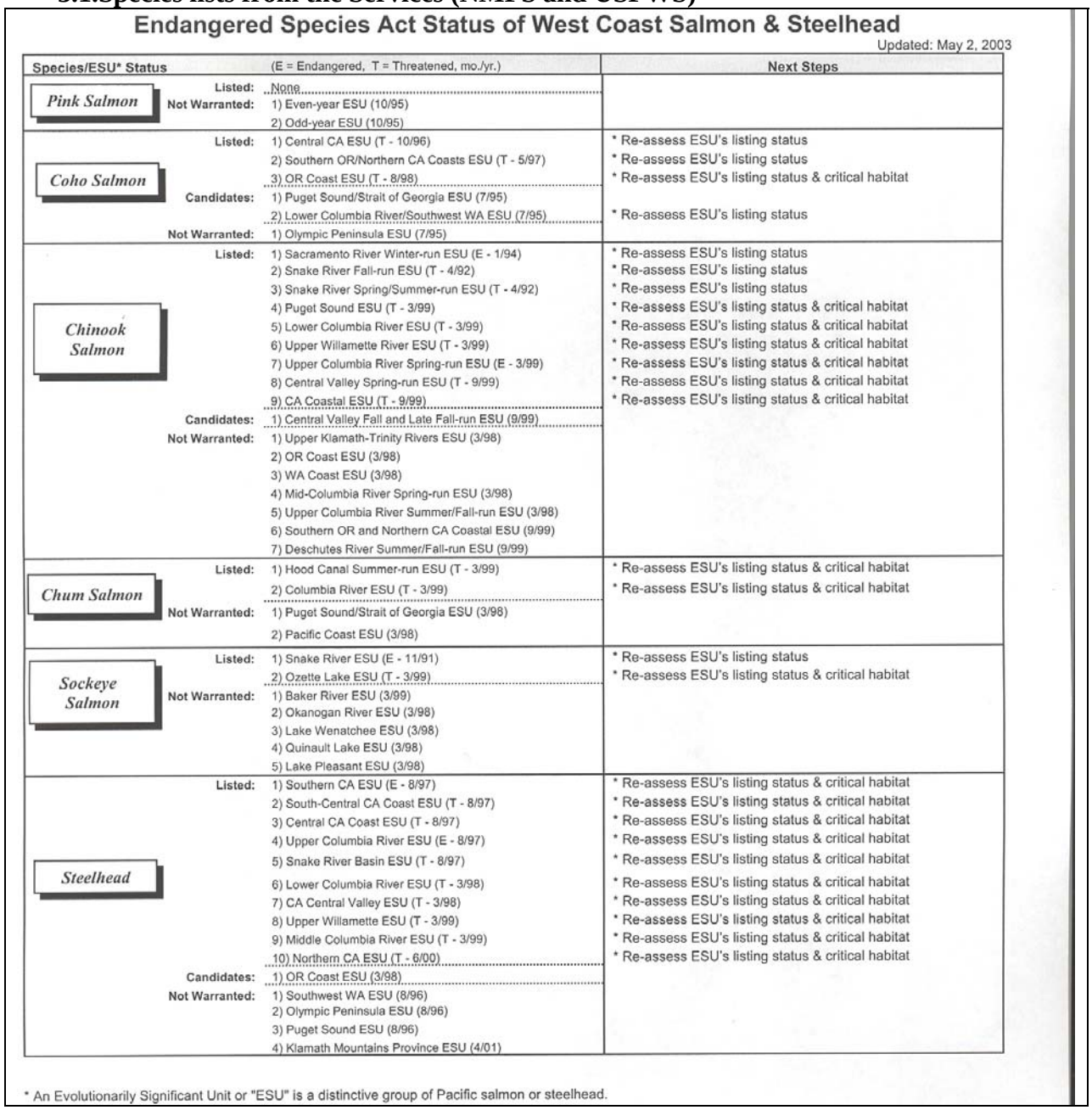
See Appendix B.

2.5.Maps of project area and action area (see 4. Environmental Baseline)

See Appendix B.

3. Status of Species and Critical Habitat

3.1.Species lists from the Services (NMFS and USFWS)



Endangered Species Act Status of West Coast Salmon & Steelhead

Updated: May 2, 2003

Species/ESU* Status	(E = Endangered, T = Threatened, mo./yr.)	Next Steps
Pink Salmon — Listed:	None	
Pink Salmon — Not Warranted:	1) Even-year ESU (10/95)	
	2) Odd-year ESU (10/95)	
Coho Salmon — Listed:	1) Central CA ESU (T - 10/96)	* Re-assess ESU's listing status
	2) Southern OR/Northern CA Coasts ESU (T - 5/97)	* Re-assess ESU's listing status
	3) OR Coast ESU (T - 8/98)	* Re-assess ESU's listing status & critical habitat
Coho Salmon — Candidates:	1) Puget Sound/Strait of Georgia ESU (7/95)	
	2) Lower Columbia River/Southwest WA ESU (7/95)	* Re-assess ESU's listing status
Coho Salmon — Not Warranted:	1) Olympic Peninsula ESU (7/95)	
Chinook Salmon — Listed:	1) Sacramento River Winter-run ESU (E - 1/94)	* Re-assess ESU's listing status
	2) Snake River Fall-run ESU (T - 4/92)	* Re-assess ESU's listing status
	3) Snake River Spring/Summer-run ESU (T - 4/92)	* Re-assess ESU's listing status
	4) Puget Sound ESU (T - 3/99)	* Re-assess ESU's listing status & critical habitat
	5) Lower Columbia River ESU (T - 3/99)	* Re-assess ESU's listing status & critical habitat
	6) Upper Willamette River ESU (T - 3/99)	* Re-assess ESU's listing status & critical habitat
	7) Upper Columbia River Spring-run ESU (E - 3/99)	* Re-assess ESU's listing status & critical habitat
	8) Central Valley Spring-run ESU (T - 9/99)	* Re-assess ESU's listing status & critical habitat
	9) CA Coastal ESU (T - 9/99)	* Re-assess ESU's listing status & critical habitat
Chinook Salmon — Candidates:	1) Central Valley Fall and Late Fall-run ESU (9/99)	
Chinook Salmon — Not Warranted:	1) Upper Klamath-Trinity Rivers ESU (3/98)	
	2) OR Coast ESU (3/98)	
	3) WA Coast ESU (3/98)	
	4) Mid-Columbia River Spring-run ESU (3/98)	
	5) Upper Columbia River Summer/Fall-run ESU (3/98)	
	6) Southern OR and Northern CA Coastal ESU (9/99)	
	7) Deschutes River Summer/Fall-run ESU (9/99)	
Chum Salmon — Listed:	1) Hood Canal Summer-run ESU (T - 3/99)	* Re-assess ESU's listing status & critical habitat
	2) Columbia River ESU (T - 3/99)	* Re-assess ESU's listing status & critical habitat
Chum Salmon — Not Warranted:	1) Puget Sound/Strait of Georgia ESU (3/98)	
	2) Pacific Coast ESU (3/98)	
Sockeye Salmon — Listed:	1) Snake River ESU (E - 11/91)	* Re-assess ESU's listing status
	2) Ozette Lake ESU (T - 3/99)	* Re-assess ESU's listing status & critical habitat
Sockeye Salmon — Not Warranted:	1) Baker River ESU (3/99)	
	2) Okanogan River ESU (3/98)	
	3) Lake Wenatchee ESU (3/98)	
	4) Quinault Lake ESU (3/98)	
	5) Lake Pleasant ESU (3/98)	
Steelhead — Listed:	1) Southern CA ESU (E - 8/97)	* Re-assess ESU's listing status & critical habitat
	2) South-Central CA Coast ESU (T - 8/97)	* Re-assess ESU's listing status & critical habitat
	3) Central CA Coast ESU (T - 8/97)	* Re-assess ESU's listing status & critical habitat
	4) Upper Columbia River ESU (E - 8/97)	* Re-assess ESU's listing status & critical habitat
	5) Snake River Basin ESU (T - 8/97)	* Re-assess ESU's listing status & critical habitat
	6) Lower Columbia River ESU (T - 3/98)	* Re-assess ESU's listing status & critical habitat
	7) CA Central Valley ESU (T - 3/98)	* Re-assess ESU's listing status & critical habitat
	8) Upper Willamette ESU (T - 3/99)	* Re-assess ESU's listing status & critical habitat
	9) Middle Columbia River ESU (T - 3/99)	* Re-assess ESU's listing status & critical habitat
	10) Northern CA ESU (T - 6/00)	* Re-assess ESU's listing status & critical habitat
Steelhead — Candidates:	1) OR Coast ESU (3/98)	
Steelhead — Not Warranted:	1) Southwest WA ESU (8/96)	
	2) Olympic Peninsula ESU (8/96)	
	3) Puget Sound ESU (8/96)	
	4) Klamath Mountains Province ESU (4/01)	

* An Evolutionarily Significant Unit or "ESU" is a distinctive group of Pacific salmon or steelhead.

3.1.1. Identification of listed species and ESU/DPS

The Middle Columbia River Evolutionary Significant Unit (ESU) of inland steelhead (*Onchorynchus mykiss*) is currently classified as threatened by the National Oceanic and Atmospheric Administration Fisheries Division (NOAA Fisheries)(FR Vol. 64, No. 57, 1999). NOAA Fisheries determined that 2 out of 15 ESU's warranted listing (Middle

Columbia and Upper Willamette River ESU's). Steelhead inhabiting the John Day River Basin within the Central Oregon Resource Area of the Prineville District Bureau of Land Management (BLM), are in the Middle Columbia ESU.

The inland steelhead ESU occupies the Columbia River Basin and tributaries upstream and excluding the Wind River in Washington and the Hood River in Oregon, to and including, the Yakima River in Washington.

In the John Day River basin, steelhead spawning occurs widely throughout the basin, primarily within tributary streams to the upper main river and its forks. The John Day River Basin contains approximately 1,800 miles of usable spawning/rearing habitat for steelhead trout, and the basin contains one of last remaining totally wild populations of steelhead trout in the Columbia River Basin. The John Day steelhead population has not been supplemented with hatchery fish.

The John Day River basin also provides habitat for spring and fall run chinook salmon. Spring chinook utilize the entire mainstem river corridor as a migratory route to upstream spawning areas. Spawning and rearing areas are located in the upper mainstem, upper North Fork, upper Middle Fork and South Fork areas. Fall chinook utilize the lower mainstem river corridor for migration, spawning and rearing.

3.1.2. Identification of designated critical habitat

All streams and rivers within the John Day River Basin capable of supporting or historically supporting steelhead.

3.2. Description of species (biology and distribution, generally available from Status Reviews)

In addition to the information to follow, this assessment incorporates the Status of Review of West Coast Steelhead from Washington, Idaho, Oregon and California; which discusses the Middle Columbia ESU status and can be found in Appendix D.

3.2.1. Biological requirements (cross reference if appropriate)

All steelhead in the Columbia River Basin upstream from The Dalles Dam are summer-run, inland steelhead (Schreck et al., 1986; Reisenbichler et al., 1992). Steelhead in Fifteen Mile Creek, OR., are genetically allied with inland *O. mykiss*, but are winter-run. Winter steelhead are also found in the Klickitat and White Salmon Rivers, WA.

Life history information for steelhead of this ESU indicates that most middle Columbia River steelhead smolt at 2 years and spend one, two, or rarely, three years in the ocean (i.e., 1-salt, 2-salt, or 3-salt fish, respectively) prior to re-entering fresh water, where they remain up to a year prior to spawning (Collette et al., 1992).

John Day River summer steelhead are currently classified as a wild population on Oregon's Wild Fish Management Policy Provisional Wild Fish Population List [OAR 635-07-529(3)]. A population meets ODFW's definition of a wild population if it is an indigenous species, naturally reproducing within its native range, and descended from a population that is believed to have been present in the same geological area prior to the year 1800. Human caused genetic changes, either from interbreeding with hatchery

origin fish or habitat modification, do not disqualify a population from the wild classification under this definition.

In the early 1960's, fishery managers released about 500,000 hatchery winter steelhead fry and limited numbers of pre-smolts used for experimental purposes. Few likely survived due to the use of improper stocks and high hauling mortality. No production releases of hatchery steelhead smolts were ever made in the John Day Subbasin. Hatchery releases for any purpose ceased in 1966 in favor of wild stocks. Today, the John Day steelhead run is composed entirely of wild stock, with straying rates running 4 to 8 percent, a rate accepted by experts to be normal and necessary to maintain genetic diversity of the wild stock (ODFWa, 1990).

Adult steelhead on their spawning migration enter the Columbia River in mid-May, pass over Bonneville Dam July-August, and enter the John Day River (JDR) as early as September, and as late as March. Emigration into the John Day Basin is dependant upon water temperatures and flows, and usually peaks in October (Unterwegner, 1999, personal communication). Steelhead will likely hold in the Columbia or the lower Deschutes Rivers until water temperatures in the JDR are suitable.

Wild summer steelhead spawn in the basin from March to mid June. A majority of steelhead spawn in tributaries that enter the John Day River ranging from as low in the basin as Rock Creek, which is located near Condon, to those streams entering the upper main forks. About 20 percent may spawn in the upper main forks of the river, depending on spring runoff conditions. Typically the earliest spawning occurs in tributaries in the lower basin, probably because flows decrease earlier in these more arid drainages.

Steelhead eggs take about 30 days at 50 degrees F to hatch, and another two to three weeks to reach fry stage. Time required for incubation varies significantly with water temperature (ODFWb, 1990). Fry emergence occurs in spring or early summer depending on time of spawning and water temperature during incubation.

Wild summer steelhead juveniles rear in the John Day basin for two to three years before migrating to the ocean as smolts. Rearing fish thrive in moderate gradient streams with high quality water, with summer water temperatures ranging from 50 to 65 degrees F. They also need streambank vegetation (grasses/sedges/, shrubs and trees) for food, cover, shade, nutrient cycling, good aquatic insect production, complex instream hiding cover, and instream large wood/structure. Ample pool habitat is essential in maximizing fish production.

Smolt migration out of the John Day Basin is staggered over several months (April to July), with peak timing in April and May (Unterwegner, 1999, personal communication). Smolt size varies by stream depending on food abundance and rearing water temperatures. Generally, healthy wild smolts average 7 inches in length. Some may be as large as 10 inches in some streams (Beech Creek, for example).

Downstream smolt movement is quite rapid, taking 45 days or less for smolts to reach the ocean from upstream rearing areas. Smolts migrate to the ocean with very determined swimming and feeding along the way. While in migration corridor habitat of the lower John Day River (Below Kimberly, RM 185, see Table 5), smolts generally stay within the river thalweg, using water depth and turbidity for cover (Unterwegner, 1999, personal communication). Smolts may stop and feed along backwaters and edges occasionally, or feed in the main current. Most smolts will reach the ocean by May, June, or July depending on the time of migration.

John Day summer steelhead typically return after one or two years in the Pacific ocean (termed 1-salt or 2-salt steelhead). About 80 percent of the John Day steelhead run are 2-salt fish. Typical of other summer steelhead stocks, very few steelhead return to spawn a second time in the John Day River Basin.

Chilcote (1998), assessed abundance, trend, and recruitment patterns for all five populations of John Day steelhead: Lower mainstem (below Picture Gorge, RM 204), Upper Mainstem (above Picture Gorge), North Fork, Middle Fork, and South Fork. The general pattern in abundance for these populations shows a low point during the late 1970s followed by an increasing trend leading to peak counts during the late 1980s (Table 4). Recently, all populations have declined to lows similar to those observed in the late 1970s.

Table 4. Index of steelhead spawners per stream survey mile for the five populations of John Day summer steelhead (1974-1997).

Year	Lower Mainstem	Upper Mainstem	North Fork	Middle Fork	South Fork
1974	4.2	5.4	5.3	5.8	13.1
1975	12.2	8.1	7.4	8.5	18.8
1976	5.7	7.4	5.8	12.8	10.4
1977	0.7	9.2	3.8	10.3	12.7
1978	7.0	6.1	2.0	8.2	7.3
1979	0.3	0.9	1.9	1.6	3.8
1980	5.3	6.1	2.7	3.1	7.2
1981	5.8	3.8	3.2	6.2	5.7
1982	3.5	4.1	4.3	5.8	9.9
1983	3.9	8.2	5.1	4.1	12.0
1984	4.5	6.5	2.3	4.7	8.1
1985	7.0	10.9	9.3	7.7	15.4
1986	20.7	16.6	8.5	16.5	13.8
1987	21.9	16.3	9.6	9.7	18.4
1988	15.8	20.9	7.8	17.3	19.4
1989	6.5	5.8	1.5	5.8	3.5
1990	5.1	5.8	1.6	2.3	8.4
1991	3.8	3.5	1.8	3.8	4.2
1992	5.0	10.1	5.1	15.9	5.4
1993	1.8	2.3	2.0	3.5	3.2
1994	1.2	4.6	2.3	4.7	5.8
1995	1.8	1.4	1.6	1.6	2.8
1996	3.0	2.3	4.7	2.7	3.1
1997	3.0	2.2	2.6	3.0	1.9

The Lower Mainstem, Upper Mainstem, and South Fork populations have remained depressed for several years (Figures 5, 6, and 9). During the last four years, these populations have been less than half of estimated equilibrium levels. While equally low or lower spawner densities were estimated in the 1970s, the levels observed in the 1990s cover a longer period of time (Chilcote, 1998).

Plots of spawner density indices for the Upper Mainstem (Figure 6), North Fork (Figure 7), and Middle Fork (Figure 8), populations all show a spike in abundance for the 1992 spawning year. A similar pattern was not observed in the Lower Mainstem and is indistinct in the South Fork (Chilcote, 1998).

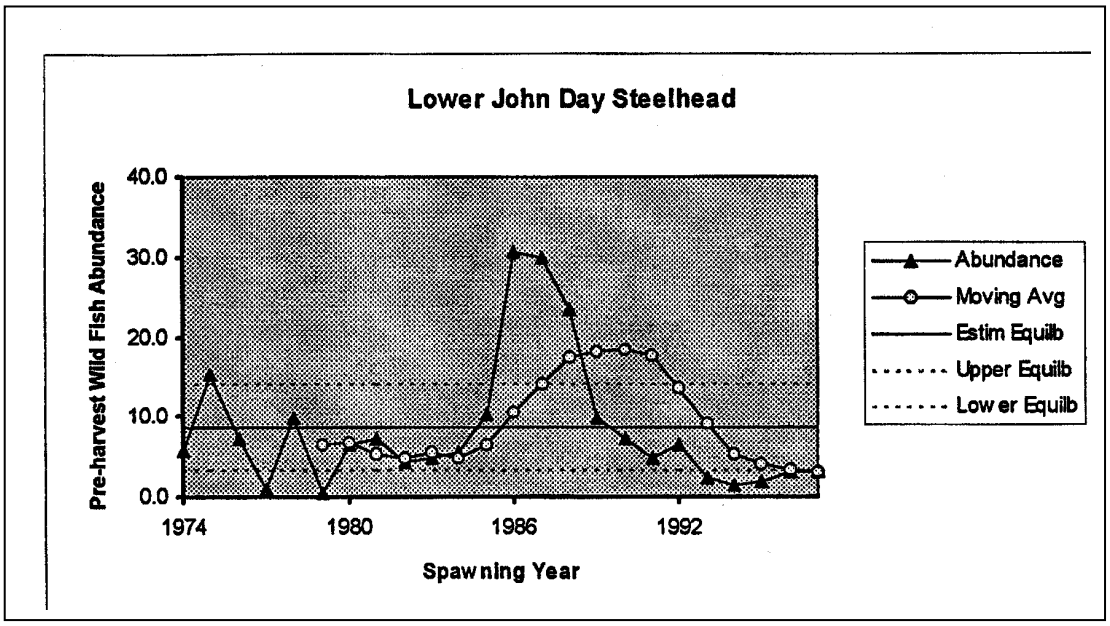


Figure 5. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in lower mainstem tributaries of the John Day River, 1974-97 relative to predicted population equilibrium (N*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

According to Chilcote (1998), the spawner abundance analysis suggests the Lower Mainstem and South Fork John Day populations are the least healthy within the basin. The South Fork population in particular shows a decline in spawner densities large enough to warrant concern about its likely persistence.

Except for the South Fork John Day population, there are no obvious signs that steelhead populations in the basin are reproductively failing or at critically low population levels. The underlying recruitment relationship for the John Day populations suggest that their capacity to respond to environmental changes is still intact. Data suggest that much of the decline in recent years has been due to poor smolt to adult survival and not population failure within basins.

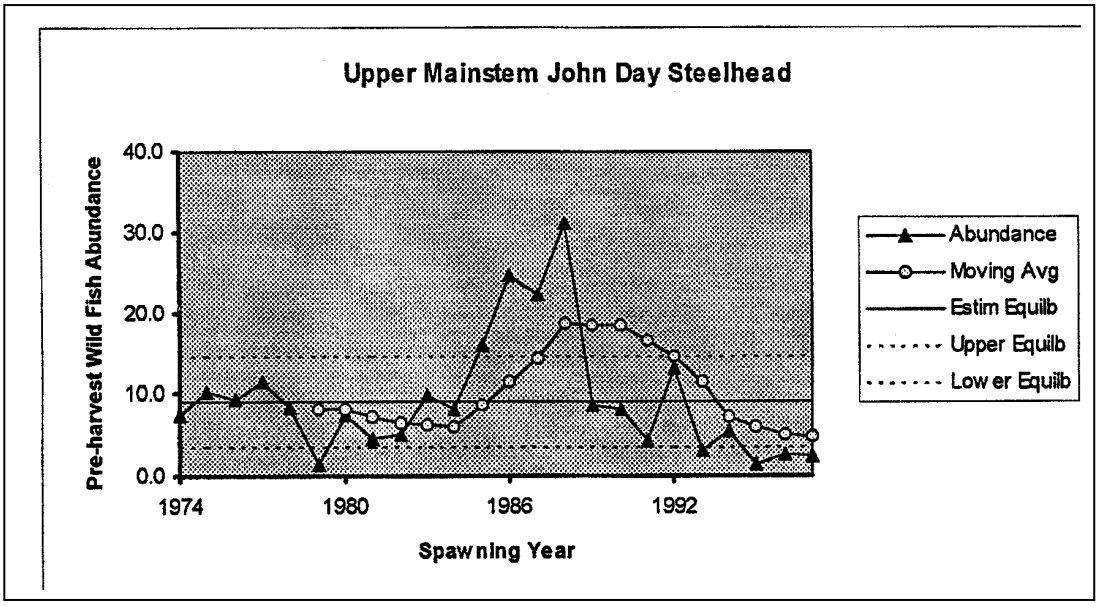


Figure 6. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in upper mainstem tributaries of the John Day River, 1974-97 relative to predicted population equilibrium (N*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

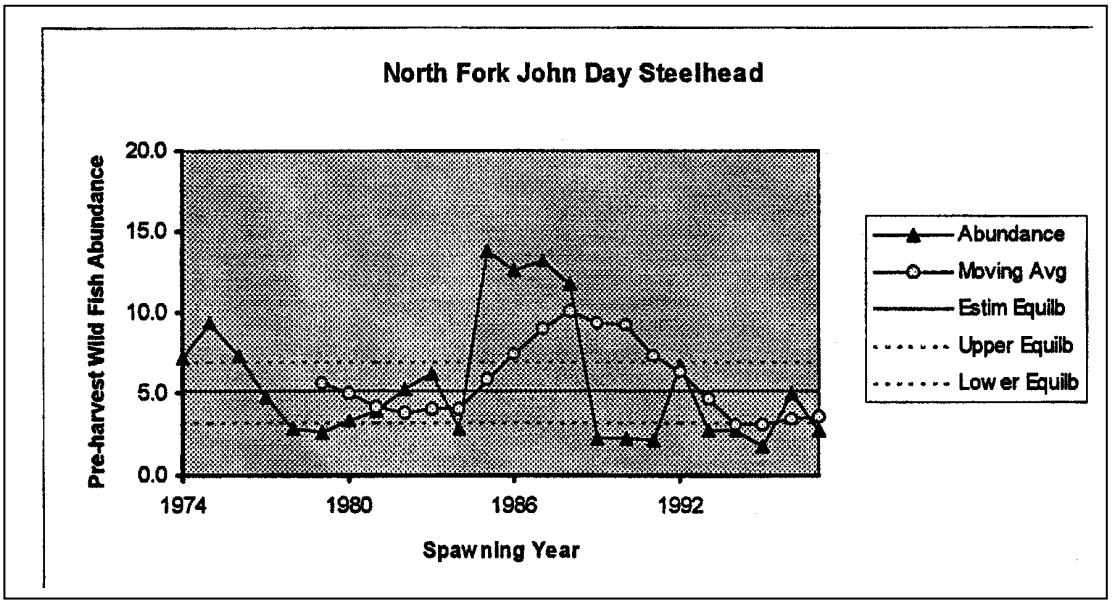


Figure 7. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in the North Fork John Day River, 1974-97 relative to predicted population equilibrium (N*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

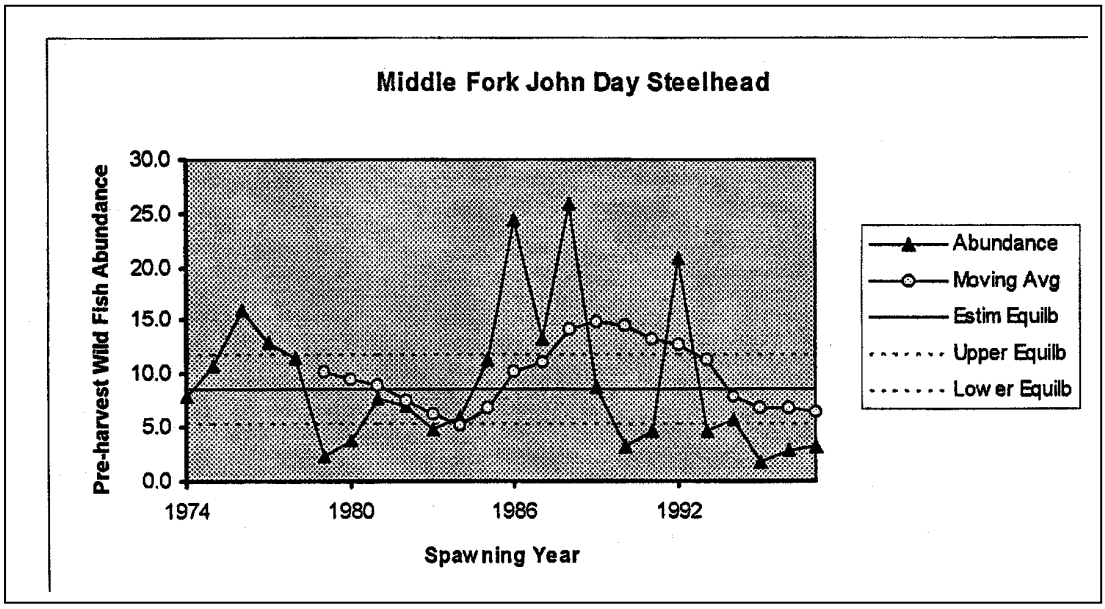


Figure 8. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in the Middle Fork John Day River, 1974-97 relative to predicted population equilibrium (N*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

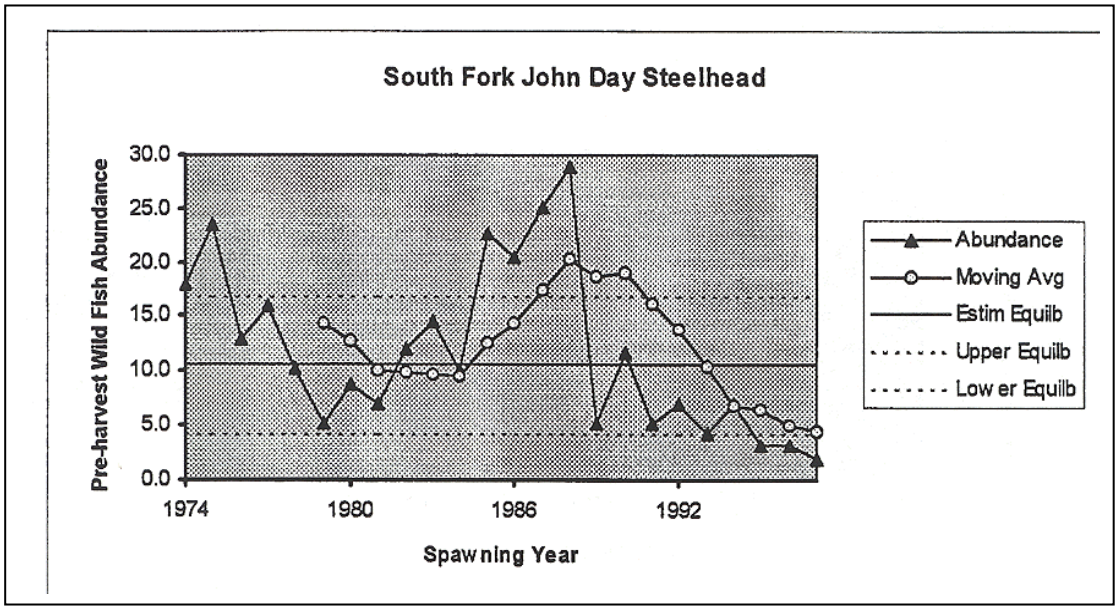


Figure 9. Annual and six-year moving average estimates of the pre-harvest abundance of wild steelhead in lower mainstem tributaries of the John Day River, 1974-97 relative to predicted population equilibrium (N*) and associated upper and lower confidence bounds derived from recruitment modeling. (Chilcote, 1998)

Assuming this pattern is cyclic, the observed declines can be expected to reverse in the next three to five years (Chilcote, 1998).

The South Fork population appears to warrant an extirpation warning. There has been a large decline (-50%) in the six-year moving average abundance of wild steelhead in this population over the last 18 years (Chilcote, 1998). The reason for this exceptional decline in the South Fork population as compared to other John Day populations is unknown (Unterwegner, 1999 personal comm.). Riparian conditions in the South Fork watershed have improved significantly in the last 20 years, particularly on BLM managed lands.

Although the North Fork population appears to be returning to expected equilibrium abundance levels, all four remaining populations in this basin remain depressed. Recruitment modeling suggests the resiliency of John Day steelhead populations is relatively intact. However, the data do not support a clear conclusion that steelhead densities in this basin have bottomed-out and are returning to equilibrium levels (Chilcote, 1998).

Hatchery fish are not released into any of the five populations examined in the John Day Basin. In addition, this basin has the distinction of being one of the few large basins in Oregon with no history of a steelhead hatchery program. Although stray hatchery steelhead are caught in the lower mainstem, especially in the fishery below Cottonwood Bridge (RM 40), they have been rare in the upper basin. It is estimated that hatchery fish comprise less than 5 percent of the naturally spawning population (Chilcote, 1998).

3.2.2. Factors of decline (cross reference if appropriate)

3.2.2.1. Historical pressures on the species

3.2.2.2. Current pressures on the species (Natural [e.g. drought, fires] and Anthropogenic [e.g. development])

Summer steelhead occur throughout the John Day Basin where habitat conditions are suitable, and accessible. Variable constraints on habitat accessibility do occur due to naturally present conditions which determine water flow in tributary streams. Yearly variations in precipitation can affect streamflows especially in the Lower John Day area. Low streamflows in this area can limit steelhead access due to not enough water flowing overland in tributary streams especially at the mouth to allow a continuous aquatic habitat for steelhead to migrate through, and thus cut off any spawning or rearing habitat within that tributary from production. This has occurred periodically within the basin, most recently in 1994 and 1999.

3.2.2.3. Limiting factors for recovery of the species within the ESU

Throughout the John Day basin wild summer steelhead utilize tributaries for critical life history phases such as spawning and rearing. Many of these tributaries naturally exhibit low late season flows and high summer water temperatures. In some areas historic stream bank degradation, poor riparian habitat conditions and ongoing irrigation withdrawals intensify these conditions.

Recreational harvest of wild summer steelhead in the JDR basin may have had a constraining effect on population size. Wild adult summer steelhead in the JDR basin have been protected from recreational harvest by regulation since September of 1995. Available data suggest that most wild juvenile migrants are 7 inches or less in length, and are protected from harvest by the 8 inch minimum length limit that has been in effect since 1997. Prior to 1997, the minimum length for harvest on trout was 6 inches. Bait fishing is allowed in all areas open to angling in the basin and incidental catch of juvenile and adult steelhead migrants is a possibility.

Based on studies from other river basins in the Pacific Northwest, there is speculation that recreational hooking and handling mortality of wild steelhead adults by hook and line anglers may contribute nearly 10 percent adult mortality of all caught and released fish (Unterwegner, 1999, personal comm.). This recreational angler induced mortality may be a significant management concern.

Natural events and conditions within the basin also constrain natural production.

Passage blocked naturally by Izee Falls on the South Fork John Day River (RM 28.5) prevents steelhead production in this segment of the South Fork and numerous tributaries to it. Several unscreened irrigation diversions in the Upper John Day subbasin contribute to losses of juvenile summer steelhead.

Prolonged drought conditions that started in the subbasin in 1984 or 1985 and continued more or less until 1994, exacerbated mainstem and tributary habitat deficiencies and may have contributed significantly to declining summer steelhead populations in the JDR basin.

A variety of man's activities outside and within the basin constrain natural production.

Passage conditions for both juvenile and adult anadromous fish at Columbia River mainstem dams contribute to declines in wild summer steelhead. The Dalles Dam, which all John Day River migrants must pass, has one of the lower rates of juvenile salmonid passage efficiency for mainstem Columbia dams due to a lack of turbine screening and effective juvenile bypass facilities. Bonneville Dam, particularly Powerhouse 2, does not have particularly effective juvenile turbine screening. Increased spill of water at both The Dalles and Bonneville dams to increase survival of Federal Endangered Species Act listed Snake River salmon should result in better survival of wild John Day River summer steelhead at these dams. Longer travel time for juveniles through dam created reservoirs in the Columbia, increased water temperature in the reservoir environment, and increased predation near mainstem dams all contribute to increased losses of juvenile and adult wild summer steelhead.

Harvest of wild summer steelhead by treaty tribal fisheries in the mainstem Columbia River is governed by the Columbia River Fish Management Plan (CRFMP 1987). This plan, agreed to by the four treaty tribes, the United States of America, and the

states of Oregon, Washington, and Idaho, directs mainstem harvest decisions on wild summer steelhead using run sizes at Bonneville Dam. Treaty tribal impacts to wild summer steelhead are not to exceed 15% of the Group A (those crossing Bonneville Dam April 1 to August 25) wild escapement and 32% of the Group B (those crossing Bonneville Dam August 26 to October 31) wild escapement during fall treaty seasons. Harvest of wild summer steelhead by treaty tribal fisheries in the mainstem Columbia River has been and will continue to be a source of mortality to John Day River basin origin wild summer steelhead.

Habitat problems affecting most inland steelhead trout populations include irrigation diversions and livestock grazing. These activities can modify river and stream channels; remove riparian vegetation; block migration routes seasonally; decrease summer flows; and increase summer water temperatures. Some populations have retreated to headwater areas as a result of these activities, causing extensive population fragmentation and declines in numbers (Kostow, 1995). Several efforts exist within the basin, specifically watershed councils in the North Fork of the John Day subbasin and the Upper Mainstem subbasin, to offer alternative methods of irrigation withdrawal to minimize impacts to habitat. Although BLM does not manage private lands, BLM is working in concert with local watershed councils where issues addressed include removal of push-up dams for irrigation and replacing them with pumping stations. Implementation of these methods improves efficiency of withdrawals and improves passage concerns.

Natural events outside the subbasin also constrain natural production in the subbasin. According to Chilcote (1998), all seven Oregon populations in the Middle Columbia ESU (Lower John Day, Upper John Day, S. Fork John Day, N. Fork John Day, M. Fork John Day, Deschutes River, and the Umatilla River) appear to share a pattern of relatively high abundance during the mid-1980s, followed by a decline in the 1990s. This decline coincides with decreases in smolt-to-adult survival as estimated from hatchery fish released from Round Butte Hatchery. Because of this observation and the fact the decline in abundance is shared by all populations, the best explanation for the downward trend is common survival factors, most likely mainstem Columbia passage and ocean survival (Chilcote, 1998).

According to Taylor (1997), scientists have found that chinook salmon returns in the Northwest show long-term trends which closely follows the climate cycles. Anderson (1995), used the “Pacific Northwest Index” (PNI) to distinguish cool, wet periods from warm, dry periods using data which goes back to 1896. Anderson then compared PNI with Columbia River spring chinook salmon returns data which goes back to 1940. The correlation between spring chinook and PNI is very strong, and indicates that salmon returns increase during cool, wet periods and decline during warm, dry periods. The period 1976-1994 was considered a “Generally dry and warm” cycle. While there are numerous habitat parameters throughout all life history phases for steelhead, natural variability from climate cycles may be a very significant influence (Taylor, 1997)

There are indications that global ocean and atmosphere conditions are the cause of long-term climate variations which affect precipitation trends in the Northwest. There is also evidence that a switch in regimes occurred in late 1994, and that conditions which tend to yield wet, cool winters in the Northwest have returned (Taylor, 1997).

Ocean productivity is known to be cyclic and responsible for trends in anadromous species survival and abundance. Natural variation in ocean productivity and subsequent survival of summer steelhead in the ocean environment may be an important factor in John Day River basin summer steelhead abundance. Protection and enhancement of subbasin habitat and summer steelhead populations remains; however, very important.

Low flow and high water temperatures in the Columbia River during drought years magnify mainstem dam passage problems for both adult and juvenile summer steelhead.

3.2.3. Local empirical information (if available)

3.2.3.1.Current local population information (e.g. abundance and distribution by life history stage for watershed/subwatershed and action area)

The Oregon Department of Fish and Wildlife conducts annual surveys of steelhead spawning throughout the John Day Basin. The results of this monitoring are included in Appendix E. In addition passage counts over The John Day and McNary dams indicates that steelhead numbers accessing the John Day and Umatilla Basins is up over the last three years.

3.2.3.2.Ongoing monitoring programs (if any)

The BLM continues to cooperate with ODFW to conduct annual spawning surveys for steelhead in the basin. The Prineville District will continue to monitor allotments and environmental conditions. This includes a wide array of monitoring and inventory including: allotment trend studies, utilization measurements, fish habitat monitoring/inventory, water temperature monitoring, streamflow measurement, cross section profiles, spawning surveys for anadromous fish, Rangeland Standards and Guidelines, and Implementation, Effectiveness and Validation monitoring as outlined by the Interagency Implementation Team.

3.2.4. Population trend of the species. Decline or Recovery?

It is difficult to make a determination of this sort but indicators would lead to upward trend.

3.3.Critical habitat designation (from Federal Register notice) for each ESU/DPS

For purposes of this discussion the BLM refers to the Federal Register Volume 65, No. 32, Wednesday, February 16, 2000, Rules and Regulation pages 7764 – 7787 for the following discussion on critical habitat. This is also included as Appendix F.

3.3.1. Geographic extent of designated critical habitat

3.3.2. Essential elements of designated critical habitat (e.g. cover or shelter, sites for breeding, reproduction, and rearing, etc.)

4. Environmental Baseline

4.1.Description of the Action Area and Project Area (Refer to Section II.E.)
See section 2.4 and Appendix B for descriptions of the Action Area and specific Project areas to be considered in this assessment.

4.2.Description of the environmental baseline (existing environmental conditions at the time of the proposed action)

Riparian Plant Community Conditions

Riparian areas generally make up less than 1 percent of the public lands in the planning area. These areas contribute to biological diversity, streambank and channel stability, and water quality, yet are often the most heavily utilized. Recreation, livestock, agriculture/irrigation, roads, and wildlife all contribute to the total use of these fragile areas. (Two Rivers RMP, 1985). Ecological condition and trend data for riparian areas was collected in the John Day Basin BLM managed lands. Since that time, with the implementation of the Strategy for Salmon 1992, and PACFISH 1994, many riparian areas have management in place to protect and enhance their condition.

Upslope Plant Communities

The planning area generally falls within the Columbia Basin physiographic province. The vegetation is predominately big sagebrush and bunchgrass, with some communities dominated by rabbitbrush and snakeweed. The rolling hills and plateaus above the drainages are usually dominated by big sagebrush on deeper soils, with low and/or stiff sagebrush on shallower soils. Bunchgrass dominated communities are also found on some of the plateaus and on most of the steep slopes of the river canyons. Public lands in the upper subbasins are dominated by ponderosa pine, Western juniper and big sagebrush vegetation zones. Western juniper has increased in abundance in many areas and led to a change in vegetative composition, due in large part to historic fire suppression in these areas.

Spawning Areas

Summer steelhead spawning areas on public lands cover much of the basin. Some streams with documented spawning include tributaries of the upper mainstem John Day River (Dixie, Standard, Indian, Canyon, and Cottonwood Creeks), the South Fork John Day River (Deer and Murderers Creeks), the North Fork John Day River (Rudio Creek), and the Lower John Day River (Bridge, Bear, Gable, Ferry Canyon, Little Ferry Canyon, Pine Hollow, Long Hollow, and Jackknife Canyon).

Habitat Conditions and Trends

Conditions of the mainstem John Day River, its forks and its tributaries are in various stages of recovery and trends for all life stages of summer steelhead. Fish habitat condition, and trend surveys were conducted in 1980-81 on most perennial and fish bearing streams in the basin. Some surveys were repeated in 1989-1990.

4.2.1. Include impacts of previous actions on species and habitat (Any completed actions, consultations, HCPs, etc.)

Due to the unique history of public lands and the origination of the BLM as a land management agency, public land ownership patterns in the John Day Basin are often scattered and irregularly shaped. During the 19th Century the United States Government, through the General Lands Office (GLO), initiated and encouraged land disposals or give-a-ways to raise funds to support government functions and encourage settlement of the west. Programs such as the Homestead Act of 1862, Railroad Land Grants beginning in 1850, the Timber Culture Law of 1873, the Desert Land Law of 1877, the Timber and Stone Law of 1878, The Carey Land Act of 1894, the Reclamation Law of 1902, and the Stockraising Homestead Law of 1916, all led toward the fragmentation of public lands. Early settlers claimed the most favorable parcels - those adjacent to water and suitable for cultivation and/or other agricultural development. As demand grew, more marginal lands became settled. Many of the land disposal laws required settlers to 'improve' the land in some way (i.e., produce a crop, remove timber, or irrigate lands). Due to natural conditions of the ecosystem where these lands were located and variations in weather (i.e. drought) many of these lands were not 'improved' according to the stipulation of the law and ownership reverted back to the GLO. This subsequent disposal and reacquisition of scattered lands further fragmented the public lands. This land pattern carried through as the GLO became the BLM. This land pattern creates challenges in managing sensitive resources when public lands are surrounded by large expanses of private lands. Management of more scattered often less desirable, less productive tracts is constrained by resource concerns and access issues. Somewhat blocked and consolidated public lands lead to more opportunities and flexibility in management. The Prineville District has for many years carried out programs aimed at consolidating public lands. In the John Day Basin these consolidated areas are located along the lower John Day River corridor below Clarno (RM109-129), the Sutton Mountain area near Mitchell, Oregon, uplands west of Rudio Mountain, (RM185-207), the South Fork of the John Day watershed (RM9-36) between the Ochoco and Malheur National Forests and the North Fork of the John Day watershed between Wall Creek and Dale.

Cattle grazing has occurred on most of the public lands considered in this assessment for at least the last fifty years more or less continuously.

4.2.2. Baseline conditions justification (i.e. scientifically supported statements about baseline conditions)

The Lower John Day subbasin encompasses about 2,011,000 acres. Prineville District BLM manages about 242,600 acres within the subbasin, from the river mouth to the confluence with the North Fork at Kimberly (RM 185). Major tributaries within the subbasin include Parrish, Kahler, Bridge, Pine, Butte, Thirty Mile, and Rock Creeks.

4.2.2.1. Inventories and surveys for site-specific habitat

The Prineville District BLM and ODFW has conducted riparian photopoint surveys and spawning surveys respectively. Results of these inventories can be found in Appendices B and E.

4.2.2.2. Discussion of the relationship between habitat in the action area and the biological requirements of the species

Table 10 lists perennial, intermittent, and ephemeral drainages in this basin that are on public lands.

Table 10. - Stream miles of summer steelhead habitat within the Lower John Day Basin. Steelhead habitat was taken from the ODFW ORIS database (1994). Potential steelhead habitat was determined using professional judgment.

Bear Creek	2.07	Bridge Creek	Perennial	Spawning/Rearing
Bologna Creek	0.3	John Day River	Perennial	Spawning/Rearing
Hay Creek	0.25 + 3.5	John Day River	Perennial/Intermittent	Spawning/Rearing
Jackknife Canyon	6.99	John Day River	Intermittent	Spawning/Rearing
Little Ferry Canyon	3.16	John Day River	Intermittent	Spawning/Rearing
Pine Hollow	4.5	John Day River	Intermittent	Spawning/Rearing
Long Hollow	1.5	Pine Hollow	Intermittent	Spawning/Rearing

4.2.2.3.Use of Properly Functioning Conditions (PFC) the Matrix of Pathways and Indicators (MPI) approach, if appropriate

Description of Ratings of Baseline Indicators for perennial streams in the Lower John Day River below Kimberly. These include: Bear Creek, Bologna Creek, and Hay Creek.

Water Temperature: Water temperature typically exceeds state DEQ water quality threshold of 64°. These streams provide a wide variety of habitat from migratory to spawning/rearing. **Not Properly Functioning**

Sediment/Turbidity: Sediment seems to be transported through these systems during high flows. Sediment buildup appears to be occurring in many stream segments associated with hydrophilic plant populations, especially willow species. Dominant substrate is gravel/cobble/sand. Early spring runoff produces moderate to high turbidity in these streams. **Not Properly Functioning**

Chemical Contamination/Nutrients: The are no known chemical contaminants in these areas. **Properly Functioning**

Physical Barriers: No barriers are known to exist. **Properly Functioning**

Substrate: Substrate is dominated be gravel/cobble with fines. Embeddedness is moderately high with fine sediment evident within the stream channel. **At Risk**

Large Wood: Large wood in these perennial streams historically played a larger role in pool formation, stream shade, and streambank stability than currently. Historic land use practices have adversely affected new recruitments, flood events have physically removed mature trees (cottonwoods, alders, willows, birch, and other species), or segregated overstory trees from water tables as stream reaches experienced downcutting. With improving grazing practices, trees and shrubs are currently increasing along most of these reaches, but it will be years before large wood recruitment to stream channels occurs at a measurable rate. Based on direct observations, current condition is **Not Properly Functioning**

Pool Frequency: Pools frequencies standards are not met in these streams. Many of these stream reaches are improving in condition. As riparian conditions improve, pool frequencies are expected to increase. **Not Properly Functioning**

Pool Quality: Pool condition and quality is increasing in these stream areas. Increased bank stability, as well as large boulder/bedrock features provide for depth and cover in many areas. Condition is on an upward trend. **At Risk**

Off-Channel Habitat: Off channel habitats are being developed as these streams develop and rebuild floodplains. Beaver presence has also led to an increase in these habitats. **At Risk**

Refugia: Refugia are present in these areas with increasing frequency. As stream conditions continue to improve these areas will become more connected and functional. **At Risk**

Width/Depth Ratio: Increase in healthy riparian vegetation has led to a narrowing of the stream channels in most areas and therefore a decrease in the width to depth ratio. **At Risk**

Streambank Condition: Streambanks in many areas show evidence of downcutting. Changed grazing management on many areas of public land in the last 8 years has shown an increase in vegetation along the stream and a subsequent increase in floodplain area as well as sinuosity. Streambanks have improved with increases in riparian vegetation and root structure increase. Conditions are **Not Properly Functioning**

Floodplain Connectivity: Many of these streams have historically had significant down cutting of stream channels. Changes in grazing management have led to increased riparian vegetation, bank stability, and floodplain area. High flows have then led to a widening of stream bottom which has served to reestablish new floodplains in many areas. **At Risk**

Changes in Peak/Base Flows: Improvements in riparian vegetation and bank structure in recent years may be increasing base flows in some streams. This is still speculative, however. **At Risk**

Increases in Drainage Network: Roads have not increased the drainage network within the watershed. There has probably been some increase in sediment due to road placement, but the drainage network itself probably has not increased. **Properly Functioning**

Road Density and Location: Road densities are low, with some valley bottom roads. **At Risk**

Disturbance History: BLM timber harvest of forested parcels within the lower John Day Basin is minimal. **Properly Functioning/Not Applicable**

Riparian Reserves: To characterize this habitat indicator, an assessment of the potential riparian sites on public lands would have to be done. No such assessment has been made. Riparian areas within these stream areas are increasing in response to grazing management. Connectivity between high quality riparian areas is also increasing. **Not Applicable**

Description of Ratings of Baseline Indicators for intermittent drainages in the Lower John Day River below Kimberly. These include: Jackknife Canyon, Little Ferry Canyon, Pine Hollow, and Long Hollow.

Generally streams within this category have very similar habitat components in varying amounts. These drainages are all characterized by similar habitat types including: seasonal/intermittent stretches of broad, channel, gravel/cobble substrate with little riparian vegetation, interspersed with areas of perennial stream usually associated with bedrock features, gravel/cobble substrate and presence of riparian vegetation. The difference in these types of habitat is typically the presence or absence of perennial reaches and residual pools where juvenile steelhead spend the summer.

Water Temperature: Water temperature typically exceeds state DEQ water quality threshold of 64° but does not exceed lethal limits for juvenile steelhead. This is due in large part to association between residual pools and water table. **Not Properly Functioning**

Sediment/Turbidity: Sediment seems to be transported through these systems during high flows. Sediment buildup does not appear to be occurring. **Properly Functioning**

Chemical Contamination/Nutrients: The are no known chemical contaminants in these areas. **Properly Functioning**

Physical Barriers: The physical barriers associated with these streams include the characteristic intermittent or ephemeral nature of the flow regime near the mouth of these tributaries. The lower section of these streams typically only flow during high spring runoff events, allowing a narrow margin for steelhead adults to move up into the drainage or juvenile steelhead to move downstream out of the basin. **At Risk**

Substrate: Substrate is dominated be gravel/cobble/boulder, and fines are not excessive in the substrate. **Properly Functioning**

Large Wood: Large wood in the Lower John Day River basin, with its narrow canyon walls and marked lack or recruitment trees, does not appear to have played a major role in channel formation and fisheries habitat. **Not Applicable**

Pool Frequency: Residual pools in perennial sections of these streams do not meet pool frequency standards. The nature of intermittent streams dictates that most scour pools will dry up, diminishing available rearing habitat. **Not Properly Functioning**

Pool Quality: Residual pools are in good condition, usually deep, and associated with cool ground water sources. **Properly Functioning**

Off-Channel Habitat: There are no residual off channel habitats within these areas, for most of the channel is dry. **Not Applicable**

Refugia: Refugia is limited to existing residual pool habitats within these streams. **Not Properly Functioning**

Width/Depth Ratio: There is a lack of wetted stream channel during rearing periods. Available rearing habitat is dominated by isolated residual pools or short reaches, that often are not linked by surface flows. **Not Applicable**

Streambank Condition: Areas with residual summer habitat are characterized by moister ground conditions and higher presence of hydrophilic plant species. **Properly Functioning**

Floodplain Connectivity: Based on the lack to stability in these systems professional judgment rates this indicator as **At Risk**.

Changes in Peak/Base Flows: Improvements in riparian vegetation and bank structure in recent years may be increasing duration that these streams flow water into the summer. This is still speculative, however. **At Risk**

Increases in Drainage Network: Roads have not increased the drainage network within the watershed. Most roads created in the area follow drainages already. There has probably been some increase in sediment due to road placement, but the drainage network itself has not increased. **Properly Functioning**

Road Density and Location: Many roads within the basin are along drainage areas; however, there is a fairly low density of road within the area to begin with. **At Risk**

Disturbance History: BLM timber harvest of forested land parcels within the lower John Day Basin is insignificant since the BLM does not manage many forested lands in the lower basin. **Properly Functioning/Not Applicable**

Riparian Reserves: To characterize this habitat indicator, an assessment of the potential riparian sites on public lands would have to be done. No such assessment has been made. **Not Applicable**

4.2.3. Map of project area at appropriate scale to show vegetation types and important biological features (species habitat, wetlands, unique plant assemblages, etc.)

See Appendix B.

4.2.4. Photographs keyed to locations labeled on map

See Appendix B.

4.3.Detailed description of habitat features that may be affected by the proposed action
Cattle grazing and prescribed fire both have the same effects to the habitat features of streams utilized by steelhead – they can remove the vegetation from the stream banks and lead to degradation of habitat.

The use of spring grazing in most of the allotments discussed in this assessment reduces significantly and can sometimes eliminate the effect of grazing on riparian areas. This is due to high flows in the channel which inundate riparian vegetation, wet and cold winter conditions within the riparian areas which push cattle to drier, warmer upslope areas.

When grazing occurs in areas with degraded riparian conditions it can lead to increased sedimentation of spawning beds, further lack of protective cover, increased summer water temperatures and a broader, shallower channel profile.

Prescribed burning, when done according to prescriptions, does not burn riparian area, but leaves them intact. If burning removes vegetation from riparian areas, increased sedimentation and lack of cover result. Since burning is not done repeatedly in any given area the nature of these effects are short term (1-3 years).

5. Effects of the Action

5.1. Direct Effects (on each species and designated critical habitat) Discuss as appropriate: temporal and spatial limits of effects; species tolerances; severity of effect; mortality and other forms of

Impacts on the steelhead resource can be grouped into two categories: 1) those actions which have a direct impact to steelhead and 2) those actions which have an indirect impact to steelhead through direct impacts to habitat conditions. Direct impacts involve actions which affect individuals of the species in such a way to constitute 'Take'. With regard to grazing this category deals with livestock trampling of steelhead, eggs, fry, smolts or adults, and are typically discrete, short duration actions. Indirect impacts involve actions which lead to 'Take', typically concerns such as habitat alteration. These actions are usually additive, longer term, less intense actions which lead to significant changes in a species habitat, to the point that individuals of the species no longer function optimally when compared to more suitable conditions.

However, while grazing strategies have been changed to provide for riparian growth, the shift to earlier season use primarily in March, April, May and June has increased the perceived potential for direct impacts (i.e. trampling concerns). The spring season overlaps with steelhead spawning times within the John Day Basin and the concern becomes an issue of direct impacts from livestock on steelhead redds.

During grazing activity there is a slight potential, (occurrence has not been observed or documented in over 10 years of spawning survey in the Deschutes and John Day Basins), for cattle to trample spawning adult fish, redds, eggs, and/or fry. This could only occur when cattle grazing and spawning/rearing timeframes overlap – typically March – June. Since most spring grazing system occur March – June the potential exists in the project area. While a trampled, post spawning adult would not have effect to the population it may result in mortality of that individual fish, trampling prior to spawning could result in a effect to the

population in the area if the trampling eliminated spawning for that respective fish. Trampling could also occur on the eggs or fry (alevins) still in the redd. This could also have an effect to the population. However the magnitude of these potential effects are not known and any quantification of such effects would be impractical.

5.1.1. Use of logical framework for analysis (e.g. use MPI or other appropriate framework. Example pathways include: water quality; habitat access; habitat elements; channel conditions/dynamics; flow and hydrology; watershed conditions)

A logical framework to discuss and describe the effects of this low potential occurrence have not been developed. The only framework available is that of observation and documentation, and within the Prineville District this effect has never been observed, much less documented.

5.1.2. Provide examples of how conservation measures (identified in II Ciii above) would reduce or eliminate the adverse effects of the proposed action

Natural climatic conditions during spring grazing typically discourage cattle loitering in riparian areas as described in section 4.3.

5.2. Indirect Effects (same criteria as V. A. Direct Effects)

Concern over indirect impacts in the late 1980's and early 1990's led to the formulation of guidelines such as PACFISH to manage habitat for salmonid fish. Grazing strategies prior to the late 1980's often created indirect impacts to habitat which eventually led to a significant degradation of that habitat and effected the viability of steelhead populations. For example years of hot-season grazing (summer long or season long) led to over utilized rangelands and a disappearance of riparian species and riparian areas, increasing erosion, and water temperatures, which in turn decreased the suitability of these areas to salmonids. On the Prineville District in the early 1990's a large effort to rework grazing management strategies and institute science based grazing systems in order to eliminate long-term habitat deterioration and promote riparian recovery was launched. Season of use changes and restrictions were instituted, based on scientific knowledge which work with the phenology of key plant species in order to determine timing of grazing and lead to development of healthy riparian areas. Science based grazing strategies to promote riparian growth have been completed for most allotments within the John Day Basin. In general this was a shift from summer long hot season grazing to early spring grazing strategies.

Rational for Checklist Ratings of Effects for Population and Environmental Indicators for Range Allotments with perennial streams in the Lower John Day River Basin.

The following allotments are included in this rating: 2547 Sixmile, 2554 Charles Hill, 2598 Hay Creek, 2607 Pryor Farms, 2609 Crown Rock, and 4093 West Bologna Creek. Actual grazing prescriptions and systems vary between these allotments. Most are grazed in early spring so as to enhance riparian production and recovery. A minor component are grazed in the hot season, which can stall maturation and vigor of riparian vegetation. This includes the Pryor Farms Allotment (2607).

Water Temperature: According to Platts (1991), the ability of plants to control stream temperatures varies with their morphology. Grass crowns provide modest overhanging cover but grasses are too short to keep much solar radiation from reaching the water, except along

very small streams (stream orders 1 and 2). Water temperatures will not be adversely affected from these grazing allotments because the timing of the use is when grasses and forbs are more palatable and preferable than shade producing shrubs and trees. With a spring use treatment on low elevation pastures, grazing in riparian areas is finished when enough soil moisture remains for nearly complete herbaceous regrowth. This protects streambank stability and provides bank roughness to catch sediments during high flows. Although there is the possibility of a small reduction of the amount of shade due to plant removal and trampling, this effect will be insignificant and should not be measurable. Extended hot season grazing will hinder recovery and maturation of riparian species, maintaining current conditions on degraded riparian areas. Plant removal and trampling will limit shade producing vegetation to mature.

Sediment/Turbidity: Early season grazing systems implemented along these perennial streams protect riparian vegetation during the growing season to allow for recovery and enhancement of riparian areas. Late season grazing systems do not protect riparian vegetation and may lead to reduction of riparian vegetation along streambanks. Reduction of streambank vegetation can serve to increase sediment production within the stream.

Chemical Contamination/Nutrients: There is a possibility of increased bacteria counts due to grazing. Early season grazing will mitigate this element due to high flows of water and riparian health and vigor. Late season grazing could increase this element due to lower flows, suppression of riparian vegetation maturation, and the extended time that livestock have access to perennial streams.

Physical Barriers: Grazing will not cause any physical barriers to fish within these allotments.

Substrate: Early season grazing may affect substrate composition and embeddedness slightly. Extended hot season grazing can keep streambanks in an unstable condition from livestock trampling and vegetation removal. Active erosion of these streambanks will maintain an elevated supply of sediment to streams, reducing the likelihood of improvement to current embeddedness levels.

Large Wood: Current grazing systems are established to protect riparian vegetation by utilizing the area at the time of year when woody vegetation is less palatable. Grazing will not limit development of future large wood to streams or affect current large wood sources potentially available to fall into streams. Extended hot season grazing will limit growth and maturity of riparian trees, as upland forage become less palatable.

Pool Frequency: Early season grazing will protect riparian vegetation and bank stability and will not affect pool frequency. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability that are needed to facilitate pool formation.

Pool Quality: Early season grazing will protect riparian vegetation and bank stability and will not affect pool quality. Extended hot season grazing likely will hinder improvements to

riparian vegetation and streambank stability that are needed to facilitate formation and maintenance of deep pools with adequate cover.

Off-Channel Habitat: Early season grazing will protect riparian vegetation and bank stability and will not affect off channel habitat. Extended hot season grazing likely will hinder improvements to riparian vegetation that are needed to facilitate off channel habitat formation.

Refugia: Early season grazing will protect riparian vegetation and bank stability and will not affect refugia. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability that are needed to facilitate formation and maintenance of suitable habitat refugia.

Width/Depth Ratio: Early season grazing will protect riparian vegetation and bank stability and will not affect width to depth ratios. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability. Condition of these habitat elements affects channel narrowing.

Streambank Condition: Early season grazing will protect riparian vegetation and bank stability and will not affect streambank condition. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability.

Floodplain Connectivity: Early season grazing will protect riparian vegetation and bank stability and will not affect floodplain connectivity. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability that are needed to maintain floodplain connectivity.

Changes in Peak/Base Flows: Early season grazing will protect riparian vegetation and bank stability and will not affect flow regime. Extended hot season grazing likely will hinder improvements to riparian vegetation and streambank stability that are needed to improve floodplain water storage, which feeds summer base flows. Grazing activities are not likely to cause changes to peak flow regimes. This indicator is primarily affected by timber harvest activities which alter snow retention and snowmelt timing.

Increases in Drainage Network: Grazing management will not affect drainage network.

Road Density and Location: Grazing management will not affect road density and location.

Disturbance History: Grazing management will not affect disturbance history.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred.

Table 11. Checklist for documenting environmental baseline conditions, and effects on relevant indicators, from **range allotments with perennial streams in the Lower John Day River Subbasin.**

PATHWAYS: **INDICATORS**	**ENVIRONMENTAL BASELINE**			**EFFECTS OF THE ACTION(S)**		
	Properly Functioning	**At Risk**	**Not Properly Functioning**	**Restore**	**Maintain**	**Degrade**
Water Quality: Temperature			**X**		**X**	
Sediment			**X**		**X**	
Chem. Contam./Nut.	**X**				**X**	
Habitat Access: Physical Barriers		**X**			**X**	
Habitat Elements: Substrate		**X**			**X**	
Large Woody Debris			**X**		**X**	
Pool Frequency			**X**		**X**	
Pool Quality		**X**			**X**	
Off-Channel Habitat		**X**			**X**	
Refugia		**X**			**X**	
Channel Cond. & Dyn: Width/Depth Ratio		**X**			**X**	
Streambank Cond.			**X**		**X**	
Floodplain Connectivity		**X**			**X**	
Flow/Hydrology: Peak/Base Flows		**X**			**X**	
Drainage Network Increase	**X**				**X**	
Watershed Conditions: Road Dens. & Loc.		**X**			**X**	
Disturbance History	**X**				**X**	
Riparian Reserves	**N/A**				**N/A**	

Rational for Checklist Ratings of Effects for Population and Environmental Indicators for Range Allotments on Intermittent Drainage in the Lower John Day River Basin.

The following allotments are included in this grouping: 2509 Belshe, 2518 Pine Creek, 2541 Eakin, 2581 Elsie Martin. Actual grazing prescriptions and systems vary between these allotments, as well as steelhead habitat. Most of these allotments are grazed in the winter and/or early spring so as to enhance riparian production and recovery. Some of these allotments contain known steelhead spawning and rearing habitat while the rest contain only migratory or no known habitat, these include: 2541 Eakin (Spawning and rearing), 2581 Elsie Martin (no known habitat).

Water Temperature: These streams are all intermittent, leaving only residual pools in the summer season. These pools are associated with bedrock constrictions and exposures. Vegetation is recovering in these areas and offering more shade for pools. Winter/Spring

grazing enhances this riparian recovery, as opposed to summer grazing. Water temperatures where measured typically exceed State Water Quality Standard of 64° F.

Sediment/Turbidity: These are typically low sediment systems with very low recruitment of fine sediment. In high flow events turbidity is high with suspended sediment in the water column, however these sediments are transported through the system.

Chemical Contamination/Nutrients: There is a possibility of increased bacteria counts due to grazing. Winter/Spring grazing will reduce this impact due to high flows of water and riparian health and vigor, and good distribution of livestock.

Physical Barriers: Grazing will not introduce any physical barriers to fish within these allotments.

Substrate: Winter/Spring grazing will not affect substrate composition or embeddedness, high flows and recovery of riparian vegetation increases buffer ability of stream.

Large Wood: Grazing will not effect large wood recruitment, or presence in streams.

Pool Frequency: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect pool frequency. Pool frequency is dependent on substrate, specifically bedrock outcrops.

Pool Quality: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect pool quality.

Off-Channel Habitat: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect off channel habitat.

Refugia: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect refugia.

Width/Depth Ratio: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect width to depth ratios.

Streambank Condition: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect streambank condition.

Floodplain Connectivity: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect floodplain connectivity.

Changes in Peak/Base Flows: Winter/Spring grazing will protect riparian vegetation and bank stability and will not affect flow regime. Flows in these streams is dependent on annual rainfall and storm events.

Increases in Drainage Network: Grazing management will not affect drainage network.

Road Density and Location: Grazing management will not affect road density and location.

Disturbance History: Grazing management will not affect disturbance history.

Riparian Reserves: Grazing management will not affect riparian reserve system.

Table 12. Checklist for documenting environmental baseline conditions and effects of **range allotments on intermittent streams in the Lower John Day River Subbasin** on relevant indicators.

PATHWAYS: **INDICATORS**	**ENVIRONMENTAL BASELINE**			**EFFECTS OF THE ACTION(S)**		
	Properly Functioning	**At Risk**	**Not Properly Functioning**	**Restore**	**Maintain**	**Degrade**
Water Quality: Temperature			**X**	**X**		
Sediment	**X**				**X**	
Chem. Contam./Nut.	**X**				**X**	
Habitat Access: Physical Barriers		**X**			**X**	
Habitat Elements: Substrate	**X**				**X**	
Large Woody Debris	**N/A**				**X**	
Pool Frequency			**X**		**X**	
Pool Quality	**X**				**X**	
Off-Channel Habitat	**N/A**				**X**	
Refugia			**X**		**X**	
Channel Cond. & Dyn: Width/Depth Ratio	**N/A**				**X**	
Streambank Cond.	**X**			**X**		
Floodplain Connectivity		**X**			**X**	
Flow/Hydrology: Peak/Base Flows		**X**			**X**	
Drainage Network Increase	**X**				**X**	
Watershed Conditions: Road Dens. & Loc.		**X**			**X**	
Disturbance History	**X**				**X**	
Riparian Reserves	**N/A**				**X**	

Rational for Checklist Ratings of Effects for Population and Environmental Indicators for Prescribed Burning in the John Day Basin

Water Temperature: Water temperatures would not be affected by this action. The riparian zone of influence adjacent to all perennial streams (fish-bearing or non fish-bearing) will be avoided from burning activities, by all reasonable methods.

Sediment/Turbidity: Minor impacts to sediment levels in perennial streams is expected. This would be a temporary condition until burned areas regrow. Intact vegetation in riparian areas will effectively filter most sediments mobilized from upland burned areas. The important aspects of post-fire hydrology are typically water retention and water quality. High intensity burns associated with wildfires can result in hydrophobic soil conditions which may decrease infiltration and absorption rates and limit water retention capacities. The effects of non-wettable soil layers are primarily the same as any dense or hard pan soil layer that restricts water movement through the soil, and often result in an increase in overland flows and surface erosion. Prescribed burns are primarily lower intensity and are designed to minimize hydrophocity.

Chemical Contamination/Nutrients: This indicator will not be affected significantly, since prescribed burns minimize the volatization of nutrients like nitrogen because of lower burn intensities.

Physical Barriers: This activity will not cause migration barriers.

Substrate Embeddedness: This indicator is not expected to be adversely affected for the same reasons discussed under Sediment/Turbidity. Riparian vegetation will also minimize any sediment delivery to the stream which could increase substrate embeddedness.

Large Wood: Large wood would not be affected by this action. The riparian zone of influence adjacent to all perennial streams (fish-bearing or non fish-bearing) will be avoided from burning activities. Effects to future or current levels of instream large wood would be minimal.

Pool Frequency: No adverse effects to pool frequencies are expected because activities within RHCA's will be avoided.

Pool Quality: No adverse effects to pool quality are expected because activities within RHCA's will be avoided.

Off-Channel Habitat: No adverse effects to off-channel habitats are expected because activities within RHCA's will be avoided.

Refugia: No adverse effects to riparian reserves are expected because activities within RHCA's will be avoided.

Wetted Width/Max Depth Ratio: No adverse effects to width to depth ratios are expected because activities within RHCA's will be avoided.

Streambank Condition: No adverse effects to streambank conditions are expected because activities within RHCA's will be avoided.

Floodplain Connectivity: No adverse effects to floodplain connectivity are expected because activities within RHCA's will be avoided. Wetland areas and riparian vegetation will be maintained.

Changes in Peak/Base Flow: No adverse effects to Peak/Base flows are expected for rationale described under Sediment/Turbidity.

Drainage Network Increase: Minor changes are expected to the drainage network, until burned areas experience regrowth of vegetation. Subsequent regrowth is expected to be denser in the future, minimizing drainage networks in the future.

Road Density and Location: Road densities could increase slightly on a temporary basis, until fireline roads are revegetated from seeding, following the burn.

Disturbance History: Disturbance history (% ECA) will not be effected by this action, because no timber harvest is prescribed in this activity.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, this activity will have no effect on riparian vegetation communities, for reasons described under Water Temperature.

5.3. Effects from interdependent and interrelated actions

There are no effects from identified interrelated or interdependent actions.

5.4. Effects from ongoing project activities (e.g. continued Operations and Maintenance)

The activities discussed previously are the ongoing activities for the area.

5.5. Description of how the environmental baseline would be affected (can be integrated in V. A-D.)

The design of the project implementation would not affect the environmental baseline. The projects have been designed to support stable or upward trends in riparian conditions and will not detrimentally affect the environmental baseline.

5.6. If critical habitat is designated, discuss effects of the action on essential elements of critical habitat (e.g. cover or shelter; sites for breeding, reproduction, and rearing; etc. as discussed in Section III.C.ii.)

Grazing actions which occur within the spring grazing timeframe will not affect essential elements of critical habitat. Grazing actions carried out on a season long basis (i.e. through the summer months) can lead to a degradation in environmental baseline and impact essential elements of critical habitat. These types of effects are the result of chronic overgrazing in sensitive areas such as riparian areas and may not manifest for several years.

5.7. Use of best scientific and commercially available data

See Appendices B and E.

5.8. Effects determination for listed species and designated critical habitat (No Effect, NLAA, LAA)

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Pastures and Allotments in the Lower John Day River subbasin;

Allotment	**Pasture**
Belshe	Dan's
Belshe	80
Belshe	Homestead
Pine Creek	North Pole
Pine Creek	Big Gulch River
Pine Creek	Big Gulch
Pine Creek	Burned Out Canyon
Pine Creek	North Guyton
Pine Creek	South Guyton
Eakin	Rutledge
Eakin	Private
C.H. Hill	Northside
C.H. Hill	South
C.H. Hill	East
Hay Creek	North
Hay Creek	Narrow
Hay Creek	Exclusion
Hay Creek	Irrigated Fields
Hay Creek	Ag Field
Hay Creek	West
Hay Creek	Spring Hollow
Pryor Farms	South
Crown Rock	Crown Rock
Crown Rock	Willow Spring

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead.

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

No. **No Effect**.

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Pastures and Allotments in the Lower John Day River subbasin;

Allotment	**Pasture**
Pine Creek	Zigzag
Sixmile	Sixmile
Elsie Martin	Elsie Martin
West Bologna Creek	West Bologna

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No. These pastures do not contain critical habitat, provide strictly migratory habitat for steelhead or grazing occurs outside of critical timeframes for both steelhead and critical habitat. The current grazing management strategies do not affect the attainment or protection of the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is less than a negligible probability of take of proposed/listed anadromous salmonids, or the effects are insignificant and discountable. These habitat and grazing strategies present in these pastures improve riparian habitat and minimize livestock use along fish bearing streams. Potential interactions between spawning and rearing fish, and livestock, when cattle are present or watering is less than negligible. **Not Likely to Adversely Affect**

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Pastures and Allotments in the Lower John Day River subbasin;

Allotment	**Pasture**
Belshe	Little Ferry
Eakin	Jackknife
Sixmile	Hay Creek
C.H. Hill	Bologna Creek
Crown Rock	Bear Creek

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead.

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the current grazing management strategies were designed to attain or protect the relevant properly functioning indicators.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is a more than negligible probability of take of proposed/listed anadromous salmonids. This is a result of grazing occurrence overlapping steelhead spawning and rearing timeframes. Although it is a low probability, and has not been observed on the Prineville District in the last ten years, there are potential interactions between spawning and rearing fish and cattle , when cattle are watering or crossing streams. This has the potential of harassing steelhead that are trying to spawn, trampling of redds, and the displacement of fry into a more hostile environment. **Likely to Adversely Affect.**

Answers to the Dichotomous Key For Making ESA Determination of Effects for the following Pastures and Allotments in the Lower John Day River subbasin;

Allotment	**Pasture**
Pine Creek	Porter Canyon
Pine Creek	Cramer Canyon
Pine Creek	Bath Canyon
Pryor Farms	North

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead.

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

Yes, hot season or season long grazing has the potential to hinder attainment of key habitat parameters, most notably streambank stability, water temperature, and large wood.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

Summer long or hot season grazing in allotments with riparian areas is known to lead to detrimental long term impacts to salmonid habitat. Relevant indicators will suffer destruction/adverse modification on a long term basis. In addition early spring use on spawning and rearing habitat in allotments #2509, #2547 and #2541 has the potential to result in take. **Likely to Adversely Affect**

Answers to the Dichotomous Key For Making ESA Determination of Effects for Prescribed Burning in the John Day Basin;

1. Are there any proposed/listed anadromous salmonids and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

Yes, Summer Steelhead

2. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators?

No, the proposed burn activities are outside of the riparian zone of influence. The nature of low intensity, prescribed burn strategies minimize off site soil erosion and sediment delivery to stream channels.

3. Does the proposed action(s) have the potential to result in "take" of proposed/listed anadromous salmonids or destruction/adverse modification of proposed/designated critical habitat?

There is a negligible (extremely low) probability of take of proposed/listed anadromous salmonids or destruction/adverse modification of habitat. Implementing mitigation measures discussed above should adequately protect water quality, channel stability, riparian vegetation communities and watershed conditions. **Not likely to adversely affect**

5.8.1. NLAA effect determinations supported by evaluation of factors critical for making the determination (e.g. conservation measures)

Yes.

5.9. Summary. Provide a quantification of the 'effects analysis' section (include assumptions, areas affected; should be qualitative, quantitative, and include a time frame)

Due to the nature of the impacts to listed species and their habitat as described above it is difficult if not impossible to quantify take for trampling and riparian degradation. Since trampling has not even been observed on the Prineville District it would be pure conjecture to put a number to the amount of take, likewise for the effects of summer grazing and its resultant impact to riparian vegetation.

5.10. Effect of proposed action on tribal resources or interests (if known)

There are no known effects to tribal resources.

6. Cumulative Effects (for Formal Consultation only; LAA determinations)

6.1. Details all 'non'-Federal' actions reasonably certain to occur in the action area in the foreseeable future. Includes state, local, private, and tribal actions (e.g. residential developments, watershed enhancements, etc.)

Within the areas described in the project area grazing is typically the only use for both public and private ground. In many areas farming also exists in the higher elevation areas but is typically not included as area in the allotment boundary. The nature of the scattered land ownership pattern results in pastures and allotment with both public and private lands within the boundaries. Since public and private lands are not typically fenced apart the grazing

system for all lands within a pasture is the same. For this reason in many areas the Federal restrictions for season of use and duration become relevant to the private lands within the pasture or allotment boundary as well. This results in private lands managed for the same timeframes and durations as the public lands within the pasture. The BLM continues to work with permittees in a cooperative fashion to manage the public resource and in turn influence management on lands within the entire management unit. This results in improving conditions in many areas on both public and private riparian areas.

6.1.1. Do not use NEPA cumulative effects

Combined Effects of Prineville District BLM actions for population and Environmental Indicators for the Lower John Day River Subbasins (See Table 13).

Water Temperature: Removal of riparian vegetation by livestock grazing with spring or short season treatments is temporary, until regrowth occurs, and effects mainly grasses and forbs. These actions are not expected to produce a negative effect on water temperatures for steelhead. Overall guidelines in place are designed to protect riparian vegetation which will maintain or improve water temperatures.

Sediment/Turbidity: Potentially a small amount of sediment could enter spawning/rearing stream reaches due to grazing. Due to guidelines in place to protect vegetation, this amount of sediment should be insignificant and not degrade steelhead habitat. Grazing systems are designed to leave residual ground cover that will minimize the amount of sediment entering the system.

Chemical Contamination/Turbidity: Water chemistry should not be impacted by federal actions due to the fact that grazing systems are designed to protect and allow the recovery of water quality.

Physical Barriers: No BLM actions should be causing migration barriers for steelhead.

Substrate Embeddedness: Potentially a small amount of fine sediment could enter the system due to grazing management. These programs are designed to minimize/prevent fine sediment from entering streams.

Large Wood: Grazing systems are designed to minimize utilization on developing trees and shrubs by using riparian pastures during seasons when upland and floodplain grasses are more palatable than woody vegetation.

Pool Frequency: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Stable, vegetated streambanks and instream large wood are important factors in the development and maintenance of high quality pool habitats. Riparian vegetation is prevented from establishing in isolated areas due to road maintenance. These areas are scattered and minor and not expected to adversely affect the frequency of deep pools.

Pool Quality: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Stable, vegetated streambanks and instream large wood are

important factors in the development and maintenance of high quality pool habitats. Riparian vegetation is prevented from establishing in isolated areas due to road maintenance. These areas are scattered and minor and not expected to adversely affect the frequency of deep pools.

Off-Channel Habitat: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Stable, vegetated streambanks and instream large wood are important factors in the development and maintenance of off-channel habitats.

Refugia: Ongoing actions are designed to protect fisheries habitat and limit the disturbance to the population.

Wetted Width/Max Depth Ratio: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Stable, vegetated streambanks and instream large wood are important factors in maintaining appropriate channel widths for each respective stream channel type.

Streambank Condition: Grazing systems are designed to protect and improve streambank stability and riparian vegetation. Well vegetated streambanks and instream large wood are important factors in maintaining good streambank conditions. Temporary minor bank damage does occur from grazing, but regrowth of vegetation protects against erosion during high flow events. Cumulatively this should not have a significant affect to steelhead habitat.

Floodplain Connectivity: All actions are designed to protect/enhance floodplain connectivity. No detrimental effects to steelhead habitat are expected.

Changes in Peak/Base Flow: Actions are designed to recover these systems to their historic flow regimes or maintain current conditions.

Drainage Network Increase: The cumulative affects on the actions should not significantly change the drainage network..

Road Density and Location: Road densities will increase very slightly in the basin, but only on a temporary basis.

Disturbance History: Disturbance history will not be adversely affected by any of the actions.

Riparian Reserves: As described in the environmental baseline section, no assessment of riparian potential has occurred. However, all actions are design to minimize affects to the riparian areas.

Table 13. Showing the checklist for documenting **combined effects for BLM actions** on relevant indicators for the **Lower John Day River Subbasins**

PATHWAYS: **INDICATORS**	**COMBINED EFFECTS OF THE ACTIONS**		
	Restore	**Maintain**	**Degrade**
Water Quality: Temperature		X	
Sediment		X	
Chem. Contam./Nut.		X	
Habitat Access: Physical Barriers		X	
Habitat Elements: Substrate		X	
Large Woody Debris		X	
Pool Frequency		X	
Pool Quality		X	
Off-Channel Habitat		X	
Refugia		X	
Channel Cond. & Dyn: Width/Depth Ratio		X	
Streambank Cond.		X	
Floodplain Connectivity		X	
Flow/Hydrology: Peak/Base Flows		X	
Drainage Network Increase		X	
Watershed Conditions: Road Dens. & Loc.		X	
Disturbance History		X	
Riparian Reserves	N/A		

Determinations of effects for the Cumulative Effects of BLM actions on the Lower John Day River Subbasins

BLM actions in these subbasins of the John Day River are comprised of grazing management that was rated as Likely to Adversely Affect, grazing management that was rated as Not Likely to Adversely Affect, prescribed burning which was rated Not Likely to Adversely Affect. Reasons for the LAA ratings were due to the possible disturbance of spawning fish and possible disturbance of rearing fish from grazing activities and spawning bed surveys or the indirect effects of habitat degradation through impacts to riparian vegetation. Grazing management activities could potentially disrupt spawning fish activities or cause juvenile rearing fish to move temporarily into a more hostile environment, or impact riparian vegetation, bank stability and water quality thereby

leading to degradation of fish habitat. The remaining determinations were based on the potential for fish habitat alterations due to affects on riparian area with regard to various actions proposed. Cumulatively these disturbances are minor, and should not impact steelhead trout populations to a magnitude that the continued existence of the species is jeopardized.

6.1.2. Includes information from:

6.1.2.1.Planning Documents

6.1.2.2.Land-Use agencies

6.1.2.3.Transportation Plans

6.1.2.4.Economic trend information

With the recent increase in beef prices it is reasonable to expect more grazing to occur on private lands as well as the maximum allowable cattle numbers to occur on Federal land under the permit stipulations.

7. Conclusions

7.1.Provides a recap of what has been examined in the BA. A summary of the project and effects determination.

This assessment has discussed livestock grazing actions on 10 allotments and 36 pastures within the lower John Day subbasin. Based on environmental baseline, project action and effects analysis: 23 pastures have been determined to be No Effect; 4 pastures have been determined to be May Effect, Not Likely to Adversely Affect; and 9 pastures have been determined to be May Effect, Likely to Adversely Affect. Of the LAA action five are the result on summer grazing which detrimentally effects riparian areas and indirectly can effect critical habitat, the remaining 5 LAA actions are so designated due to the slight potential of trampling.

This assessment has also discussed the effects of the prescribed burning program within the lower John Day subbasin. Based on information these actions are determined to be May Effect, Not Likely to Adversely Affect.

8. References

8.1.Citations and appropriate literature

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USDI, Bureau of Land Management. 1985. Two Rivers Resource Management Plan, Record of Decision, Rangeland Program Summary (RPS). Prineville District, BLM. Prineville, OR.

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8.2.Index/copies of pertinent documents (e.g. permits, NEPA documents, key literature if not readily available, etc.)

9. Essential Fish Habitat

9.1. Description of the proposed action (may refer to BA project description)

Refer to section 2.3 above. Actions proposed fall within a subbasin and selected watersheds that contain essential fish habitat migratory corridors or spawning and rearing areas.

9.2. Addresses EFH for appropriate Fisheries Management Plans (FMP).

9.3. Effects of proposed action

9.3.1. Effects on EFH (groundfish, coastal pelagic, and salmon EFH should be discussed separately)

Proposed actions described in this assessment do not affect essential fish habitat. See Section 5 above.

9.3.2. Effects on managed species (unless effects to an individual species are unique, it is not necessary to discuss adverse effects on a species-by-species basis)

See section 9.3.1.

9.3.3. Effects on associated species, including prey species

See section 9.3.1.

9.3.4. Cumulative Effects

Since proposed action do not affect essential fish habitat there are no cumulative effects.

9.4. Proposed Conservation Measures

There are no conservation measures for EFH.

9.5. Conclusions by EFH (taking into account proposed conservation measures)

There are no effects to EFH.

9.6. Appropriate References (See Section VIII above)

See Section 8 above.

Appendix A

Subpart 4140-Prohibited Acts

Sec. 4140.1 Acts prohibited on public lands.

The following acts are prohibited on public lands and other lands administered by the Bureau of Land Management:

(a) Grazing permittees or lessees performing the following prohibited acts may be subject to civil penalties under Sec. 4170.1:

(1) Violating special terms and conditions incorporated in permits or lease,

(2) Failing to make substantial grazing use as authorized for 2 consecutive fee years, but not including approved temporary nonuse, conservation use, or use temporarily suspended by the authorized officer,

(3) Placing supplemental food on these lands without authorization.

(4) Failing to comply with the terms, conditions, and stipulations of range improvement cooperative agreements or range improvement permits;

(5) Refusing to install, maintain, modify, or remove range improvements when so directed by the authorized officer.

(6) Unauthorized leasing or subleasing as defined in this part.

(b) Persons performing the following prohibited acts related to rangelands to civil and criminal penalties set forth at §§ 4170.1 and 4170.2:

(1) Allowing livestock or other privately owned or controlled animals to graze an or be driven across these lands:

(i) Without a permit or lease, and annual grazing authorization. For the purposes of this paragraph, grazing bills for which payment has not been received do not constitute grazing authorization.

(ii) In violation of the terms and conditions of a permit, lease, or other grazing use authorization including, but not limited to, livestock in excess of the number authorized;

(iii) In an area or at a time different from that authorized: or

(iv) Failing to comply with a requirement under Sec. 4130.5(c) of this title.

(2) Installing, using, maintaining, modifying, and/or removing range improvements without authorization:

(3) Cutting, burning, spraying. destroying, or removing vegetation without authorization;

(4) Damaging or removing U.S. property without authorization;

(5) Molesting, harassing, injuring. poisoning, or causing death of livestock authorized to graze on these lands and removing authorized livestock without the owner's consent;

(6) Littering;

(7) Interfering with lawful uses or users including obstructing free transit through or over public lands by force, threat, intimidation. signs, barrier or locked gates;

(8) Knowingly or willfully making a false statement or representation in base property certifications, grazing applications, range improvement permit applications, cooperative agreements. actual use reports and/or amendments thereto;

(9) Failing to pay any fee required by the authorized officer pursuant to this part, or making payment for grazing use of public lands with insufficiently funded checks on a repeated and willful basis:
(10) Failing to reclaim and repair any lands. property, or resources when required by the authorized officer:
(11) Failing to reclose any gate or other entry during periods of livestock use.
(c) Performance of an act listed in paragraphs (c)(1), (c)(2) or (c)(3) at this section where Public land administered by the Bureau of Land Management is involved or affected, the violation is related to grazing use authorized by a permit or lease issued by the Bureau of Land Management. and the permittee or lessee has been convicted or otherwise found to be in violation of any of these laws or regulations by a court or by final determination of an agency charged with the administration of these laws or regulations, and no further appeals are outstanding, constitutes a prohibited act that may be subject to the civil penalties set forth at § 4170.1-1.
(1) violation of Federal or State laws or regulations pertaining to the:
(i) placement of poisonous bait or hazardous devices designed for the destruction of wildlife:
(ii) application or storage of pesticides, herbicides, or other hazardous materials:
(iii) alteration or destruction of natural stream courses without authorization,
(iv) pollution of water sources;
(v) illegal take, destruction or harassment. or aiding and abetting in the illegal take, destruction or harassment of fish and wildlife resources: and
(vi) illegal removal or destruction of archeological or cultural resources;
(2) violation of the Bald Eagle Protection Act (16 U.S.C. 668 et. seq.). Endangered Species Act (16 U.S.C. 1531 et. seq. or any provision of part 4700 of this tilde concerning the protection and management of wild free-roaming horses and-burros: or
(3) violation of State live-stock laws or regulations relating to the branding of livestock: breed, grade, and number of bulls; health and sanitation requirements, and violating State, county, or local laws regarding the stray of livestock from permitted public land grazing areas onto areas that have been formally closed to open range grazing.

Subpart 4150-Unauthorized Grazing Use

See. 4150.1 Violations.

Violation of Sec. 4140.1 (b)(1) constitutes unauthorized grazing use.
(a) The authorized officer shall determine whether a violation is nonwillful. willful, or repeated willful.
(b) Violators shall be liable in damages to the United States for the forage consumed by their livestock. for injury to Federal property caused by their unauthorized grazing use, and for expenses incurred in impoundment and disposal of their livestock. and may be subject to civil penalties or criminal sanction for such unlawful acts.

Sec. 41 50.2 Notice and order to remove.

(a) Whenever it appears that a violation exists and the owner of the unauthorized livestock is known, written notice of unauthorized use and order to remove livestock by a specified date

shall be served upon the alleged violator or the agent of record, or both. by certified mail or personal delivery. The written notice shall also allow a specified time from receipt of notice for the alleged violator to show that there has been no violation or to make settlement under Sec. 4150.3.

(b) Whenever a violation has been determined to be nonwillful and incidental. the authorized officer shall notify the alleged violator that the violation must be corrected, and how it can be settled. based upon the discretion of the authorized officer.

(c) When neither the owner of the unauthorized livestock nor his agent is known, the authorized officer may proceed to impound the livestock under Sec. 4150.4.

(d) The authorized officer may temporarily close areas to grazing by specified kinds or class of livestock for a period not to exceed 12 months when necessary to abate unauthorized grazing use. Such notices of closure may be issued as final decisions effective upon issuance or on the date specified in the decision and shall remain in effect pending the decision on appeal unless a stay is granted by the Office of Hearings and Appeals in accordance with 43 CFR 4.21.

Sec. 4150.3 Settlement.

The amount due for settlement shall include the value of forage consumed as determined in accordance with paragraph (a), (b), or (c) of this section. Where violations are repeated willful. the authorized officer shall take action under Sec. 4170. 1 -1 (b) of this title. The amount due for all settlements shall include the value of forage consumed as determined by paragraph (a). (b), or (c) of this section. Settlement for willful and repeated willful violations shall also include the full value for all damages to the public lands and other property of the United States; and oil reasonable expenses incurred by the United States in detecting. investigating, resolving violations. and livestock impoundment costs.

(a) For nonwillful violations: The value of forage consumed as determined by the average monthly rate per AUM for pasturing livestock on privately owned land (excluding irrigated land) in each State as published annually by the Department of Agriculture. The authorized officer may approve nonmonetary settlement of unauthorized use only when the authorized officer determines that each of the following conditions is satisfied:

(1) evidence shows that the unauthorized use occurred through no fault of the livestock operator;

(2) the forage use is insignificant;

(3) the public lands have not been damaged: and

(4) nonmonetary settlement is in the best interest of the United States.

(b) For willful violations: Twice the value of forage consumed as determined in paragraph (a) of this section.

(c) For repeated willful violations: Three times the value of the forage consumed as determined in paragraph (a) of this section.

(d) Payment made under this section does not relieve the alleged violator of any criminal liability under Federal or State law.

(e) Violators shall not be authorized to make grazing use on the public lands administered by the Bureau of Land Management until any amount found to be due the United States under this section has been paid. The authorized officer may take action under Sec. 4180. 1-2 of this title to cancel or suspend-grazing authorizations or to deny approval of applications for

grazing use until such amounts have been paid. The proposed decision shall include a demand for payment.

Sec. 4150.4 Impoundment and disposal.

Unauthorized livestock remaining on the public lands or other lands under Bureau of Land Management control, or both, attar the date set forth in the notice and order to remove sent under Sec. 4150.2 may be impounded and disposed of by the authorized officer as provided herein.

Sec. 4150.4-1 Notice of intent to impound.

(a) A written notice of intent to impound shall be sent by certified mail or personally delivered to the owner or his agent, or both. The written notice shall indicate that unauthorized livestock on the specified public lands or other lands under Bureau at Land Management control, or both, may be impounded any time after 5 days from delivery of the notice.
(b) Where the owner and his agent are unknown, or where both a known owner and his agent refuses to accept delivery, a notice of intent to impound shall be published in a local newspaper and posted at the county courthouse and a post office near the public land involved. The notice shall indicate that unauthorized livestock on the specified public lands or other lands under, Bureau at Land Management control, or both. may be impounded any time after 5 days from publishing and posting the notice.

Sec. 4150.4-2 Impoundment.

After 5 days from delivery of the notice under Sec. 4150.4-1 (a) of this title or any time after 5 days from publishing and posting the notice under Sec. 4150.4-1 (b) of this title, unauthorized livestock may be impounded without further notice any time within the 12-month period following the effective date of the notice.

Sec. 4150.4-3 Notice of public sale.

Following the impoundment of livestock under this subpart the livestock may be disposed of by the authorized officer under these regulations or, if a suitable agreement is in effect. they may be turned over to the State for disposal. Any known owners or agents, or both, shall be notified in writing by certified mail or by personal delivery of the sale and the procedure by which the impounded livestock may be redeemed prior to the sale.

Sec. 4150.4-4 Redemption.

Any owner or his agent, or both, or lien-holder of record of the impounded livestock may redeem them under these regulations or, if a suitable agreement is in effect, in accordance with State law, prior to the time of sale upon settlement with the United States under Sec. 4150.3 or adequate showing that there has been no violation.
Sec. 4150.4-5 Sale.

It the livestock are not redeemed on or before the date and time fixed for their sale, they shall be offered at public sale to the highest bidder by the authorized officer under these regulations or, if a suitable agreement is in effect, by the State. If a satisfactory bid is not received, the livestock may be reoffered for sale, condemned and destroyed or otherwise disposed of under these regulations, or if a suitable agreement is in effect, in accordance with State Law.

Subpart 4160-Administrative Remedies

Sec. 4160.1 Proposed decisions.

(a) Proposed decisions shall be served on any affected applicant. permittee or lessee, and any agent and lien holder of record, who is affected by the proposed actions. terms or conditions, or modifications relating to applications, permits and agreements (including range improvement permits) or losses, by certified mail or personal delivery. Copies of proposed decisions shall also be sent to the interested public.
(b) Proposed decisions shall state the reasons for the action and shall reference the pertinent terms, conditions and the provisions of applicable regulations. As appropriate, decisions shall state the alleged violations of specific terms and conditions and provisions of these regulations alleged to have been violated, and shall state the amount due under §§ 4130.8 and 4150.3 and the action to be taken under § 4170.1.
(c) The authorized officer may elect not to issue a proposed decision prior to a final decision where the authorized officer has made a determination in accordance with § 4110.3-3(b) or § 4150.2(d) of this part.

Sec. 4160.2 Protests.

Any applicant, permittee, lessee or other affected interests may protest the proposed decision under Sec. 4160.1 of this title in person or in writing to the authorized officer within 15 days after receipt of such decision.

Sec. 4160.3 Final decisions.

(a) In the absence of a protest. the proposed decision will become the final decision of the authorized officer without further notice unless otherwise provided in the proposed decision.
(b) Upon the timely filing of a protest, the authorized officer shall reconsider his proposed decision in light of the protestant's statement of reasons for protest and in light of other information pertinent to the case. At the conclusion to his review of the protest the authorized officer shall serve his final decision on the protestant or his agent, or both, and the interested public.
(c) A period at 30 days following receipt of the final decision, or 30 days after the date the proposed decision becomes final as provided in paragraph (a) of this section, is provided for filing an appeal and petition for stay of the decision pending final determination an appeal. A decision will not be effective during the 30-day appeal period, except as provided in paragraph (f) of this section. See §§ 4.21 and 4.470 of this title for general provisions of the appeal and stay process.

(d) When the Office of Hearings and Appeals stays a final decision of the authorized officer regarding an application for grazing authorization. an applicant who was granted grazing use in the preceding year may continue at that level of authorized grazing use during the time the decision is stayed. except where grazing use in the preceding year was authorized on a temporary basis under §§ 4110.3-1 (a). Where an applicant had no authorized grazing use during the previous year, or the application is for designated ephemeral or annual rangeland grazing use, the authorized grazing use shall be consistent with the decision pending the Office of Hearings and Appeals final determination on the appeal.

(a) When the Office of Hearings and Appeals stays a final decision of the authorized officer to change the authorized grazing use, the grazing use authorized to the permittee or losses during the time that the decision is stayed shall not exceed the permittee's or lessee's authorized use in the last year during which any use was authorized.

(f) Notwithstanding the provisions of § 4.21 (a) of this title. the authorized officer may provide that the final decision shall be effective upon issuance or on a date established in the decision and shall remain in effect pending the decision on appeal unless a stay is granted by the Office of Hearings and Appeals when the authorized officer has made a determination in accordance with § 4110.3-3(b) or § 4150.2(d) of this part. Nothing in this section shall affect the authority of the Director of the Office of Hearings and Appeals or the Interior Board of Land Appeals to place decisions in full force and affect as provided in § 4.21 (a)(1) of this title.

Sec. 4160.4 Appeals.

Any person whose interest is adversely affected by a final decision of the authorized officer may appeal the decision for the purpose of a hearing before an administrative law judge by following the requirements set out in § 4.470 of this title. As stated in that part. the decision must be filed within 30 days after the receipt of the decision or within 30 days after the date the proposed decision becomes final as provided in 4160.3(a). Appeals and petitions for a stay of the decision shall be filed at the office of the authorized officer. The authorized Officer shall promptly transmit the appeal and petition for stay to ensure their timely arrival at the appropriate Office of Hearings and Appeals.

Subpart 4170-Penalties

See. 4170.1 Civil penalties.

Sec. 4170. 1 -1 Penalty for violations.

(a) The authorized officer may withhold issuance of a grazing permit or lease, or suspend the grazing use authorized under a grazing permit or lease, in whole or in part, or cancel a grazing permit or lease and grazing preference, or a free use grazing permit or other grazing authorization. in whole or in part, under Subpart 4160 of this title, for violation by a permittee or lessee of any of the provisions of this part.

(b) The authorized officer shall suspend the grazing use authorized under a grazing permit, in whole or in part. or shall cancel a grazing permit or lease and grazing preference, in whole or

in part. under Subpart 4160 of this title for repeated willful violation by a permittee or losses of Sec. 4140.1 (b)(1) of this title.

(c) Whenever a nonpermittee or nonlessee violates Sec. 4140.1(b) of this title and has not made satisfactory settlement under Sec. 4150.3 of this title the authorized officer shall refer the matter to proper authorities for appropriate legal action by the United States against the violator.

(d) Any person who is found to have violated the provisions of Sec. 4140.1 (a)(6) after August 21. 1995 , shall be required to pay twice the value of forage consumed as determined by the average monthly rate per AUM for pasturing livestock on privately owned land (excluding irrigated land) in each State as supplied annually by the National Agricultural Statistics Service, and all reasonable expenses incurred by the United States in detecting. investigating. and resolving violations. If the dollar equivalent value is not received by the authorized officer within 30 days of receipt of the final decision, the grazing permit or lease shall be cancelled. Such payment shall be in addition to any other penalties the authorized officer may impose under paragraph (a) of this section.

Sec. 4170. 1 -2 Failure to use.

If a permittee or lessee has, for 2 consecutive grazing fee years. failed to make substantial use as authorized in the lease or permit. or has failed to maintain or use water bass property in the grazing operation, the authorized officer, after consultation. coordination and cooperation with the permittee or losses and any lienholder of record, may cancel whatever amount of permitted use the permittee or lessee has failed to use .

Sec. 4170.2 Penal provisions.

Sec. 4170.2-1 Penal provisions under the Taylor Grazing Act.

Under section 2 of the Act any person who willfully commits an act prohibited under § 4140.1 (b), or who willfully violates approved special rules and regulations is punishable by a fine of not more than $500

Sec. 4170.2-2 Penal provisions under the Federal Land Policy and Management Act.

Under section 303(a) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.), any person who knowingly and willfully commits an act prohibited under § 4140.1 (b) or who knowingly and willfully violates approved special rules and regulations may be brought before a designated U.S. magistrate and is punishable by a fine in accordance with the applicable provisions of Title 18 of the United States Code, or imprisonment for no more than 12 months or both.